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No. 44.

CATALOGUE OF THE LEPIDOPTEROUS SUPERFAMILY NOCTUIDÆ FOUND IN BOREAL AMERICA.

BY

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WASHINGTON:
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ADVERTISEMENT.

This work (Bulletin No. 44) is one of a series of papers intended to illustrate the collections belonging to the United States, and constituting the National Museum, of which the Smithsonian Institution was placed in charge by the act of Congress of August 10, 1846.

The publications of the National Museum consist of two series—the Bulletin, of which this is No. 44, in continuous series, and the Proceedings, of which the sixteenth volume is now in press. A small edition of each paper in the Proceedings is distributed in pamphlet form to specialists in advance of the publication of the bound volume.

The Bulletin of the National Museum, the publication of which was commenced in 1875, consists of elaborate papers based upon the collections of the Museum, reports of expeditions, etc., while the Proceedings facilitate the prompt publication of freshly-acquired facts relating to biology, anthropology, and geology, descriptions of restricted groups of animals and plants, the discussion of particular questions relative to the synonymy of species, and the diaries of minor expeditions.

Other papers, of more general popular interest, are printed in the Appendix to the Annual Report.

Full lists of the publications of the Museum may be found in the current catalogues of the publications of the Smithsonian Institution.

Papers intended for publication in the Proceedings and Bulletin of the National Museum are referred to the Committee on Publications, composed as follows: T. H. Bean (chairman), A. Howard Clark, R. E. Earll, Otis T. Mason. Leonhard Stejneger, Frederick W. True, and Lester F. Ward

S. P. LANGLEY,
Secretary of the Smithsonian Institution.

WASHINGTON, D. C., *July 5, 1893.*

A CATALOGUE,

BIBLIOGRAPHICAL AND SYNONYMICAL,

OF THE SPECIES OF MOTHS OF THE

LEPIDOPTEROUS SUPERFAMILY NOCTUIDÆ,

FOUND IN

BOREAL AMERICA.

WITH CRITICAL NOTES,

BY

JOHN B. SMITH, Sc. D.,
Professor of Entomology in Rutgers College.

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PREFACE.

The basis of good work in any science is a knowledge of what has been done in the past. This proposition does not need argument for its support, and it follows, logically, that any work which facilitates the acquirement of this basic knowledge and brings together systematically and critically the results theretofore obtained will also facilitate the advance of the science. The study of the North American Noctuidæ has been seriously embarrassed by the difficulty in acquiring this foundation; not always because books were lacking, but often because the knowledge was contained in so many without an index to guide the student. Since Mr. Grote's catalogue of 1874 no comprehensive bibliographical work on this family has been published, while the number of species has nearly doubled and the literature has increased enormously. This state of affairs results in the formation of card catalogues or indices made by each student to facilitate his own work, and gradually he becomes familiar with the knowledge published by his predecessors. But this does not help others, and the same work is done over and over again by those engaged in the same fields of study. It has also been extremely difficult, even after becoming familiar with the literature, to ascertain exactly what species were really before the older writers. Characters now regarded as essential were not even noted by them and descriptions which, with the few species at hand, were characteristic and pointed became vague and indefinite when larger material brought us many and closely allied species. The greatest bugbear to American Lepidopterists has been the work of Francis Walker in the catalogues of the British Museum. Mr. Grote after twenty years of study in the Noctuidæ had failed to identify a large percentage of the species, while even of the species described by Guenée forty years ago, a number are still unidentified in American collections. For ten years I have been accumulating material for a monograph of the North American Noctuidæ, and have examined about all the books obtainable in Philadelphia, New York, Washington, and elsewhere, and have purchased papers on the subject whenever opportunity offered. I have had, during that time, unusual opportunities for studying the material in the leading American collections, and some of the results obtained have been published in my various "Contributions toward a monograph of the Noctuidæ of Temperate North America."

Some years ago it was contemplated by Dr. C. V. Riley and myself to issue a complete monograph of this family, giving all that could be learned of the early stages as well as the more strictly systematic work, and for several years a great deal of material was gathered. It is to Dr. Riley that I owe a very large part of the facilities for study in the scattered collections, and my sincere gratitude is due to him for his many kindnesses of all descriptions. Pressure of more imperative duties compelled Dr. Riley to abandon his part of the work, and I have gradually published such portions as were completed.

With the knowledge to be obtained in American collections, the necessity for studying the material contained in those of Europe, and especially that in the British Museum, became constantly more obvious. In September, 1891, it became possible for me to get away for a few weeks, and in the interest of the United States National Museum under instructions from the assistant secretary of the Smithsonian Institute in charge of the Museum, I carefully studied parts of the collections contained in the museums at London, Paris, and Berlin, and visited also the Staudinger collection at Dresden.

The notes made by me during this trip are incorporated in the following pages; but a brief statement of the character and condition of the collections examined may not be amiss.

The British Museum contains of American Noctuidæ the material collected by Doubleday and worked over by Guenée in 1852, and by Walker between 1856 and 1858; the material from all other sources worked over by Walker during the same period; the Zeller collection and the Grote collection, besides the miscellaneous accumulations from all sources, including a very interesting lot collected by Lord Walsingham. The Doubleday material is in large part provided with locality labels, but it also contains specimens purchased by him, the fatherland of which is more than doubtful. Guenée has in some instances written "New Yorck," where nothing on the insect nor in the record will authorize it. It is in most cases easy to identify the specimens described by Guenée, though not all of them have labels in his handwriting. Walker had, in addition to the Doubleday material containing the Guenée types, a lot of material collected in Nova Scotia and in the British Possessions in North America. Some of the Abbot material is also in the collection. Mr. W. F. Kirby says (Can. Ent., XX, 231), "There are a number of specimens originally collected by Abbot in the British Museum and probably in other collections," and this is borne out by the fact that some of the specimens seen by me are evidently the originals of the figures contained in the magnificent collection of Abbot's drawings in the Museum. Among them are such rarities as *Cossus basalis* Wlk. (*Inguromorpha slossoni* Hy. Edw.), and *Acherdoa ferraria* Wlk. (*Varina ornata* Neum.), both of them only recently rediscovered and redescribed. The figures of these species are exact copies of the specimens furnishing Walker's types, though the Museum record gives no clue to the source of the specimens.

Much of the material described by Walker is in very poor condition, and it required a very thorough knowledge of the American fauna to identify the species in all cases. Walker's method, according to Butler (Journ. Linn. Soc., Zoöl., Vol. XII, pp. 402 and 432), and personal statements to me, was rather peculiar. His habit was to pin into a box, in series, as many specimens as it would conveniently hold, and then begin describing. At the end of the day's toil the box would be closed without indication of what had been accomplished, and next morning work would be recommenced from recollection of what had been previously done. None of the specimens were labeled until the descriptions were in type, and then, using a proof sheet, the printed names were cut out and pinned below the series of specimens, not on the insects themselves. Sometimes it happened that there were more names than insects: in such case the label was pinned into the box and, occasionally, the record "type lost," was made. Thus, sometimes two of Walker's names may refer to the same specimen as well as to the same species, and it is not always easy to ascertain when this is so. Judging from the fact that sometimes the descriptions do not in the least fit the specimens labeled, there is reason to believe that no great care in applying the names was exercised.

Messrs. Grote and Robinson, and afterward Mr. Grote alone, have examined the Walker material and have identified many of the species. In 1887 Dr. Riley looked over the material carefully and secured colored figures of many of the species theretofore unrecognized. These figures and the notes accompanying them, Dr. Riley has kindly loaned me and they have been of assistance to me in a number of instances. Mr. Butler has, recently, in rearranging the collection, published the synonymy of some others of the Walker species. Mr. Grote seems never to have spent sufficient time at the work to get more than a few scattering notes, and most of these seem to have been made without material for comparison and from recollection merely. Yet most of them are correct. Mr. Butler's knowledge of our fauna is altogether too slight to make his notes conclusive in the case of obscure species. Critical or synonymical notes should never be made except upon careful study and comparison by a specialist or one fully acquainted with the fauna concerned. Justice to an author requires that his writings be studied before relegating his species to the synonymy, and if neither time nor opportunity for such study exists, it is simply adding confusion to ignorance to make synonymical notes on superficial comparisons.

Mr. Henry Edwards has also on one or more occasions examined portions of the Museum collections, but seems never to have made any systematic study. He has informed me in conversation that he had notes on many of the Bombycids which he intended to put into shape for publication: but his untimely death prevented this.

The new arrangement of the noctuids in the British Museum is utterly at variance with accepted standards. Mr. Butler's generic associations embrace species of *Hadena*, *Mamestra*, *Tæniocampa* and others under one term, while closely allied species may be widely separated under different generic names. Mr. Butler has not, to my knowledge, given any key to his classification, and criticism is therefore impossible. I wish simply to call attention to the fact that in this collection the arrangement of the species is on a unique basis, and that few of the generic associations are pure, according to German, French, and American definitions. Judged by these standards the arrangement is an utterly unscientific hotchpotch. In the course of this rearrangement, Mr. Butler has united the Grote and Zeller material with the old collection, forming one series. The Walker types are ascertained and the printed label associated with the specimen is placed on the pin. If the Walker name has priority, a "type" disk is pinned next to it. If the name is a synonym, the "type" disk is put on the pin with the insect and with the printed label. In all cases where the type of a species is in the series a "type" disk next the specimen calls attention to it. This greatly facilitates the search for species, and my task was considerably lightened by my ability to compare the Guenée, Walker, and Grote types side by side. Mr. Butler has published critical and synonymical notes on the species so far as arranged, much the greater part of them in the "Entomologist," since my visit to the Museum. In the majority of instances the associations are correct; but much of the synonymy given was already known, and in that which is new there are some bad errors, caused by the failure to compare structural characters and relying only on an apparent, superficial resemblance. But many species were yet left unidentified with the other American material. In those parts of the collection not yet arranged, the work was more tedious and involved more labor. There was an advantage, however, in the fact that the arrangement was according to Walker's catalogues and it was thus easy to find the specimens, little as the association might be warranted. Mr. Butler in his rearrangement seems to have preserved, as far as possible, every original label that would indicate or aid in identifying a type and has additionally marked those specimens that he considers as such.

I thus made my studies under exceptionally favorable circumstances. The Grote collection is really the basis of the nomenclature in American collections generally, and a very great point was gained when I could identify the Guenée and Walker names with the Grote names for the same species. In addition, I had with me a small series of specimens generally unnamed in collections, or of which I was doubtful, and these were carefully compared. A full set of my own monographic papers enabled me to verify the correctness of the identifications there made, and a series of notes and drawings aided me in other groups. In the Deltoids I had drawings of nearly all the species as they are named in the National Museum, and these were carefully compared and the synonymy noted. I think I can claim a familiarity with a very large percentage of the American species, and I could thus readily determine in most instances whether or not I correctly knew the insects. As my time was limited, I did not study *Acronycta*, which Dr. Riley had already studied on a prior occasion, nor *Catocala*, which Messrs. Grote and Henry Edwards had compared. Outside of these genera I found all save four or five of the Walker species, and was able to recognize nearly all of them. Of those not found, Mr. Butler has seen no trace as yet, and they may be "lost." Some few, I believe five species, described by Mr. Walker, from the Saunders collection, now at Oxford, are yet unknown to me, as I could not get to that city.* The species described from Dr. Bethune's collection I have previously identified, and the types are now in the National Museum. In Vols. V and VI of the Canadian Naturalist and Geologist, Mr. Walker described a few species collected by Mr. D'Urban, and afterward donated to the Entomological Society of Ontario. These Mr. Grote has examined, and most of them were identified with other described species; the others were omitted from all of Mr. Grote's lists, and were forgotten. To the kindness of Mr. J. Alston Moffat, curator of the Society, I owe an opportunity of examining these species, and have identified them in the following pages.

I desire at this point to express my sincere thanks to Mr. Butler and to the entire Entomological Staff of the British Museum, for the ready courtesy and great kindness with which they gave all aid in their power to facilitate my work. A regretable attack of illness confined Mr. Butler to his home during most of my stay, else I might perhaps have succeeded in finding a trace of the few yet unidentified species. I do not at all agree with Mr. Butler's ideas on Noctuid genera, yet this does not prevent a high appreciation of the work he has done, nor a feeling of sincere gratitude for the good-natured readiness with which he gave me all the assistance in his power.

A knowledge of the collections now in the British Museum is the basis of our knowledge of the North American Noctuidæ to-day.

Some of the species described by Guenée are in the Jardin des Plantes in Paris, and this I also visited. The museum and the collections there were a distinct disappointment. Not only is it cooped up in numerous small rooms, packed in inconvenient places, but for years past it seems to have had little or no attention, and there is apparently no pretence of arrangement. Yet with the kind assistance of M. Aug. Sallé, I did succeed in getting at most of the species marked "M. N.," in the species Géneral. I was in hopes of being able to get track of the Abbot drawings, from which Guenée described a number of species; but I did not succeed in this. It was a matter of great regret to me that I did not spend the time devoted to Paris, in visiting M. Oberthür at Rennes; but I did not realize how little there was of importance, at Paris, and how much there was at Rennes. The brief time at my disposal made it impossible to repair the error and I went on to Berlin.

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* I have since, by the kind assistance of Mr. Wm. Schaus, identified three of them.

Here again I found a well-preserved and well-arranged collection, not particularly rich in North American species, but with many South American forms valuable for comparisons, generic and otherwise, and with a considerable number of arctic forms, including some of Dr. Staudinger's types.

I owe thanks here to Dr. Karsch for his obliging courtesy in giving such assistance as I asked. In fact, the most pleasant and agreeable features of my trip were the hearty coöperation I met with everywhere and the ready willingness to aid, by any means in their power, that distinguished all those having charge of the collections I desired to see.

The trip to Dresden was a distinct disappointment. Dr. Staudinger was not in town, and the Moeschler collection had not been acquired by him as I had been informed it had. Mr. E. Bang-Haas did all in his power by showing me such northern material as had been studied by Dr. Staudinger; but this was a poor substitute for what I had expected or had been led to expect. My leave of absence was then about exhausted and I returned to America via Bremen.

In preparing the notes made in the European collections I found that it would be necessary to refer to the greater part of the described species, and after consulting with Dr. Riley, I concluded to prepare a catalogue embodying not only my notes on the types in foreign collections, but also on those in American collections. My aim is to give, as nearly as may be, the present location of the type specimen of every noctuid species described from America since Guenée wrote.

This necessitates a reference to some of the American collections containing types. Of the individual collections, by far the most important is that of Mr. B. Neumoegen, of New York city. Mr. Neumoegen has succeeded in accumulating a very large amount of valuable material, mainly from the Western States, and this has been in large part named by Mr. Grote, Mr. Henry Edwards, and more recently by myself. He has the types of 233 or about 13 per cent of our species; not always unique types, but specimens so marked.

Next in importance is the collection of the late Henry Edwards, also of New York city. Mr. Edwards described many species from his own collection and furnished specimens for a considerable number of the species described by Messrs. Grote and Harvey. A large part of the value of Mr. Edwards' collection is derived from the fact that he personally collected a very great portion of it, and that it is labeled with the exact locality of capture and not merely with a State label. This collection has been acquired for the American Museum of Natural History in New York city, and will be, when in place there, a most valuable one for the student.

The collection of Mr. Fred Tepper, of Brooklyn, now the property of the Agricultural College of Michigan is next in rank, containing 114 types, many of them described by Mr. Morrison, and some of them duplicating the "types" in other collections.

The Strecker collection at Reading, Pa., contains a considerable number of types; not only all that were described by Dr. Strecker himself but also some of those described by Mr. Morrison and Dr. Behr.

At some distance behind are the collections of Mr. E. L. Graef, of Brooklyn, N. Y; Dr. Roland Thaxter, of Cambridge, Mass.; Dr. J. A. Lintner, of Albany, N. Y.; Dr. George D. Hulst, of Brooklyn, N. Y.; Mrs. C. H. Fernald, Amherst, Mass., and the collections of Dr. James Bailey and Mr. W. W. Hill, both of Albany, N. Y., deceased.

I owe thanks in each case to the owners of the collections above named for courtesies extended to me and in some cases for lists of the types contained in the collections; all of which are incorporated in the following pages.

Perhaps a few words concerning "types" may not be entirely out of place right here. Dr. Hagen holds that every specimen named by an author of a species described by himself, is a type. Mr. Morrison was yet more liberal and marked as "type" a number of specimens of species described by Mr. Grote, having presumably compared them with the actual type. Mr. Grote's practice seems to have been to mark all specimens before him when writing hisoriginal description, as "type," and I think Mr. Grote is right. It is the sum of the characters of the specimens before the describer that makes the species, and though neither may be the type of *all* the characters, yet all are types of the species. There are thus instances where types of Mr. Grote's species are in two or more collections. This is more especially true of the species described in his earlier and most recent writings; the first, presumably, because of the greater dependence for material upon individual collections; the second after the sale of his collection, when he gave away most, if not all, the material received. In the case of my own species "types" are often even more widely distributed. I deem it a positive advantage to have types in several collections, but I would name nothing a type which came to hand after the original description was written.

The Bailey collection is now in the hands of Dr. T. P. Bailey, son of Dr. James Bailey, by whom the collection was made. It has more types than I have noted; but my notes on the collection are scant and were made several years ago. The W. W. Hill collection is in the care of his family, and is for sale. It contains comparatively few unique types, but is valuable from the long series of specimens accurately labeled with the exact locality and usually also with the date of capture—a very treasure to the student. Dr. Lintner's collection is valuable for much the same reason. From these collections Mr. Grote obtained much of the material from which he described, and the returned specimens while not often marked "type" except in the early days, are yet typical in that they formed part of the material on which the species was based.

Dr. Thaxter has collected extensively in Massachusetts and Maine and to a less extent in Florida. These collections furnished types for many species described by Mr. Grote, and of which Dr. Thaxter has duplicates. His material is thus largely typical while not often marked "type." The collections made by Mrs. Fernald at Orono, Me., are in much the same case. She furnished the material for a number of new species to Messrs. Grote and Morrison, but has few "types."

The Graef collection contains many rarities collected years ago, when Mr. Grote first began his studies, and contains also a share of the material collected by Morrison. A very great proportion of the species were determined by Mr. Grote, and the specimens often form part ot the material from which the descriptions were made.

The Hulst collection, now in my charge at Rutgers College, is especially rich in Catocalæ, typifying Dr. Hulst's work in that genus, and it contains types also in several other genera.

Prof. F. H. Snow, of Lawrence, Kans., has types of a few species, but furnished the material for a considerable number of descriptions. His New Mexican material was all named by Mr. Grote and is typical of three papers on New Mexican moths.

Prof. George H. French, of Carbondale, Ills., has types of a few species described by himself and there are a few other types scattered in various collections.

Mr. David Bruce has collected extensively in Colorado and his collections have furnished types of a considerable number of species, most of them described by myself. Most of these types are not in Mr. Bruce's collection; but I have so labeled some of the material returned to him, where it formed part of the original lot from which the descriptions were made. The determinations of my own species in that collection are nearly all made by comparison with the original types.

Of Institutions containing noctuid types, the Agricultúral College of Michigan contains the Tepper collection already mentioned. A few type specimens are in the Cornell collection at Ithaca, N. Y. Rutgers College has the Hulst collection and types of some of my species. The Hy. Edwards collection is in the American Museum of Natural History.

In the collection of the American Entomological Society of Philadelphia are a number of types of the species described by Messrs. Grote and Robinson, and also of some described by Mr. Grote alone. In the Canadian Entomologist, IV, 109, Mr. Grote writes concerning the work by Mr. Robinson and himself: "The collection on which these and all our other joint entomological writings were based, is now in the possession of the American Entomological Society." If that was true in 1872, it certainly is not so now, because but a very few of the species are at present in that collection. Of these, a very small proportion only have a written label. Some have a little printed "type" label; but nothing to indicate of what it is the type. In at least two cases I found these "type" specimens under names with which they had no possible relationship. Fortunately the excellent figures given in illustration of the papers referred to, make it possible to ascertain the names of which the specimens are typical. But many species have disappeared, leaving no trace; in whose hands they are at present I have been unable to ascertain. Mr. Grote, in the third and fourth volumes of the Transactions of the American Entomological Society, published a number of descriptions referring to the types as in this same collection. Most of these also have disappeared except in the Deltoids where nearly all are present, properly labeled. Here, however, museum pests have been at work and some of the specimens are in a very precarious condition. I have compared many specimens to get a duplicate series as nearly as possible resembling the originals. This series will be deposited in the United States National Museum, when completed. But Mr. Grote's statement, above cited, was too broad. I think he must have intended to refer to the Noctuids only, for, certainly, many of the types in other families are in the American Museum of Natural History, New York city.

In the museum of the Boston Society of Natural History is the Harris collection, containing a considerable number of specimens labeled by Harris himself. There are also a few of Mr. Morrison's types in the collection.

At Cambridge, in the Museum of Comparative Zoölogy, are most of the types of Dr. Packard's species described from Labrador. These were originally in the Museum of the Peabody Academy, at Salem, where I first saw them, and they were then in a sadly fragmentary condition, and on the high road to complete destruction. Their transfer to Cambridge was a decidedly wise move, and when I last saw them there they looked much better and bid fair to last for some time to come. A carefully compared set of specimens is a desideratum. For his work on the North American Lepidoptera, Zeller derived a considable portion of his material from this collection, and most of his noctuid types are here. A few Grote and Morrison types are also deposited here.

The collections in the U. S. National Museum are very rich in noctuidæ, but have comparatively few types of the older authors. A small number of the Walker types were donated to the museum by Dr. C. J. S. Bethune, at my request, in 1891. All of Dr. Riley's species are represented in the collection, forming part of his gift to the museum, and in that collection were also a few Morrison types. Morrison's types, it will be noted, are everywhere. The collection originally formed by myself was purchased by the museum, and contained types of a few species described by myself, and of a number of species described and given me by Mr. Grote after the sale of his collection to the British Museum. In the Meske collection, now also in the museum, there are a few types by Grote, Harvey and Lintner, while it also contains nearly the same series of species to be found in the other Albany collections previously mentioned. The Belfrage material purchased for the museum contains no types, but it contains a duplicate series of many of the Texan species described by Messrs. Grote and Harvey, often under the exact label in number and color mentioned in the characterization of the type.

Of the species more recently described by myself, the museum contains a large proportion of the types. It has been my effort to place, so far as I could do so, the types of all my species in this museum, and to make it. for the future American students, as nearly typical and complete as possible. My various contributions toward a monograph of the noctuidæ are based on this collection, and the collection is arranged and named in accord with my published work, which it thus typifies. In the American noctuidæ this collection is, in the quality of material, the length of series, the localities represented, and range ot variation shown, by far the best in the country or even in the world, for the British Museum series is very much poorer in specimens, though incomparably richer in types.

With the above explanation, the references to the location of types made in the following pages will be easily understood.

As already indicated, my systematic work necessitated the formation of a card catalogue. As a starting point I adopted Mr. Grote's bibliographical list of 1874, and transferred it to cards, adding subsequent references from time to time so as to keep it up to date. Naturally enough I followed Mr. Grote's plan at first and noted neither the date of the publication nor the dates of flight, even when given. Localities were indicated only in the most general terms. I soon found that I could not rely on the accuracy of Mr. Grote's references in all cases, and that there was no pretence of completeness in the bibliography. Occasionally only the name of the publication and page were given and neither volume nor year. I have therefore, in almost every case verified the references given, and where I have copied bibliography and synonymy without verification I have generally stated that fact. In spite of all care I can not hope to have escaped errors. Every reference has been transcribed from original note to card and from card to manuscript, and finally transferred to type. This leaves a margin for error, and although I have in the great majority of cases verified the reference to original description from the manuscript, errors may have crept in and may have been overlooked.

The omission of dates of publication in my original cards made it necessary to go over every reference to make the addition and here I found Dr. Hagen's "Bibliotheca" invaluable. Yet the dates given of some of the older works issued in parts can be considered as approximate merely. In most cases this is of little practical importance, and where it is, I have gotten as close to the truth as I could. Some of these works bear the date of the preface or title page while the body of the work may not have appeared for some years afterward. Hübner's Verzeichniss is dated 1816 and contains references to the noctuidæ in the second hundred of the Zutræge which, according to Mr. Grote in Can. Ent., XIII, 92, was published in 1823. Now, either the references were published from five to seven years before the descriptions and plates appeared or the Verzeichniss was not published until long after its date. In view of this fact and the fact that the entire first hundred of the Zutræge is referred to, no earlier date than 1820 can be reasonably assumed for Hübner's list. This makes it long subsequent to Ochsenheimer's Systema Glossatorum, also dated in 1816 and, I believe, actually published about that time. Yet I have cited 1816 as the date of the Verzeichniss in most cases where it conflicts with no other reference. Usually the dates given by Dr. Hagen have been accepted as controlling.

In citing references from society publications I have used the date given on the printed forms, even where I was well assured that the date was later, wherever this method would not involve the question of priority. The noctuidæ have been singularly fortunate in offering a very few cases only in which there could be any serious doubt as to which name had priority. In 1874 and 1875, when Messrs. Grote, Morrison, Harvey, and Strecker were publishing at about the same time, several species were twice described, with narrow margins between the dates of publication; but these margins were at once fixed and no confusion resulted. In a number of cases Mr. Grote has duplicated descriptions in separate journals, each description purporting to be that of a "n. sp." Thus, descriptions in the Bull. Bkln. Ent. Soc. are duplicated in the Canadian Entomologist, while descriptions in that journal are duplicated in the Bull. Buff. Soc. Nat. Sci. As this duplication occurred mainly at about the date Mr. Morrison was describing, I assume that it was intended to secure two chances of priority.

In citing localities to show geographical distribution, a variety of difficulties arise. Few species are so evenly distributed as to occur in all parts of any large region, and yet, in giving the geographical range in a work of this character it is practically impossible to give details even when ascertainable. Many of our States afford varieties of surface, of climate and of geological formation that support quite different sets of moths. To cite "New York," for instance, does not indicate that the species occurs all over that State. Many species are found on Long Island that are not found at Albany, while the Albany region affords many peculiar forms not thus far duplicated elsewhere in the State. The Catskill and Adirondack regions each have forms peculiar to themselves, while along the northern and western boundaries of the State still other forms occur. Most of the other States are in much the same case, and in some the matter is more serious. Texas has two quite distinct faunal regions, one of them giving the normal Atlantic forms, the other extending into New Mexico and Arizona, and giving quite a distinctive set of species. Colorado has a surprisingly varied fauna, as will appear in the following pages. Yet a citation by

States or by groups of States has been the only one feasible. A species may occur in New York, Pennsylvania, Massachusetts, Vermont and Maine, and only in one or two localities in each; yet the entire geographical group will be cited. I have endeavored, however, to specify as much as possible in a work of this kind. By such expressions as "Canada to Texas to Colorado," it is intended to indicate that between these extremes the species has been recorded from most of the States. The term "Canada," as here used, includes the Provinces of Ontario and Quebec, other British possessions being cited as published or labeled. Finally, I have reason to believe that the "East Florida" of the British Museum list may mean Texas or Georgia as often as what is now known as Florida.

The sources for the localities given are the original descriptions, lists published by Lintner, Thaxter, Snow, Van Duzee, Hill, Mrs. Fernald, and others, in the entomological journals and elsewhere, a very complete list of species taken in Colorado by Mr. Bruce, the collections at Rutgers College, and in the National Museum, and the duplicate lists of species named by me for correspondents for several years past. The dates given are from the same sources, the National Museum collection being especially well labeled in the Californian and Texan series.

My studies in the noctuids have been almost exclusively systematic, and the references made by me on the cards were such as would facilitate my work in that direction. I have included all references to descriptions of early stages, habits, etc., found in the entomological and scientific journals or publications, but have not searched economic literature. This latter has grown to such enormous proportions in recent years that it merits a separate index, and there is so much repetition, so much compilation, and so much duplication that to include the matter here would have extended the work unnecessarily. Mr. Henry Edwards in his catalogue of the described early stages of Lepidoptera, Bulletin No. 35 of the National Museum, has covered this ground fairly well, and I have not recognized the necessity of duplicating all his references.

The only exceptions made are that I have cited Dr. Riley's Missouri reports, some of Dr. Lintner's reports, and the volumes of the Entomological Commission; the first and second of these because they contain descriptions of new species, and in the case of Dr. Riley's reports, excellent and characteristic figures: the latter because the treatment is scientific and monographic, containing exhaustive treatises on all phases of structure, habit, and development.

Bulletin 35 of the U. S. National Museum should be, therefore, bound with the present work to complement and complete it.

Our literature contains a large number of notes on species, giving no new or useful information and of merely local interest. References to these have been omitted. The object has been to give: (1) The place of original description; (2) complete redescriptions; (3) additions to the knowledge concerning the species; (4) the changes made in generic location. Under this latter head I have not included references to such lists as adopt a different generic term for an entire genus, *e. g.*, Mr. Grote uses *Apatela* and *Heliophila* for *Acronycta* and *Leucania*; but I have not cited his lists for this change in term since it does not carry with it any suggestion of difference in structure. Where a species appears in the catalogue in a genus different from the one last cited, the reference is usually to be credited as original here or in my list of the Lepidoptera of boreal America, published in 1891.

In synonyms the same rules are observed, because the literature of the synonym is often better or more accessible than that of the original species, and the final reference given is that which places the name as a synonym. Usually I have given a reference only to the first positive statement of the synonymy; but where more than one observer have independently so referred a name, I have as a rule cited them all. Where no reference to the synonymy appears in the bibliography it is original here.

Finally, while I have given the reference to the original descriptions of the genera, I have not given generic synonyms nor references to redescriptions of a genus. The generic synonymy appears sufficiently in the bibliography of the species, while redescriptions will be readily found under the same references. I have made no attempt to specify the "types" of genera, for opinion differs in many cases in which I have made no original study of the matter, and I do not care to adopt or reject conclusions without some verification. Usually Mr. Grote has been followed except in his use of certain Hübnerian genera. I do not think that under the utmost latitude the Tentamen should be considered authority for a generic term, while the Verzeichniss names so far as applicable must be used eventually. It follows from this that in some cases older generic terms may have to be substituted for those now in use; but I think such cases will not be great in number.

With this somewhat lengthy explanation of the origin and purpose of the catalogue I submit it to the consideration of lepidopterists generally.

All the species contained in the National Museum collection are marked with an asterisk (*). I hope that those who have species not so marked, in duplicate, will send specimens to complete the collection for the benefit of students generally. The advantage of a central. complete collection accessible at all times, constantly cared for, the property for all scientific ends of students generally, can not be overestimated.

JOHN B. SMITH.

RUTGERS COLLEGE, *April 5, 1892.*

INDEX TO AUTHORS AND WORKS CITED.

Only those works of an author cited in the catalogue are here noted. Works published in the Proceedings or Transactions of an Institute or Society are cited from the society's publication in most instances, and only rarely by the title of the memoir. Under the name of each author is given a list of his books here cited. Names which have no such lists appended, represent authors that have published on American Noctuidæ in periodical, society, or institute literature only. Periodical, society, and institute literature is indexed by the first word of the usual abbreviation. Separate works are found only under the name of the author and are not independently indexed by their usual abbreviation.

So far as it goes, Hagen's *Bibliotheca Entomologica* has furnished dates and titles; more recent works are in most cases given from my own notes. The dates given are of the beginning and end of works issued in parts, or those given on the title page of others. Periodical literature is not dated here, the date ot the volume or part cited being always given in the catalogue.

SIGNS USED.

*Specimens are in the National Museum collection.
‡Name cited in error.
‖Name preoccupied.

AMER. ENT. The American Entomologist: An illustrated magazine of popular and practical entomology. New York.

AM. JOURN. SCI. Silliman's American Journal of Arts and Sciences.

AMER. NAT. The American Naturalist: An illustrated magazine of natural history. Philadelphia.

ANDR. Andrews, W. V.

ANGUS, James.

ANN. LYC. NAT. HIST. N. Y. Annals of the Lyceum of Natural History in New York. Published by the society.

ANN. AND MAG. NAT. HIST. Annals and Magazine of Natural History. London.

ANN. SOC. ENT. BELG. Annales de la Société Entomologique de Belgique. Bruxelles. Published by the society.

ANN. SOC. ENT. FR. Annales de la Société Entomologique de France. Paris. Published by the society.

AN SP. DIST. A distinct or good species: not a synonym.

BAILEY, Dr. James.

BATES, J. Elwyn.

BDV. or BOISD. Boisduval, Jean Alphonse.

IC. HIST. DES LEP. Icones historiques des Lèpidoptères d'Europe, nouveaux ou peu connus. Paris, 1832–1843.

FN. ENT. MADAG., LEP. Faune entomologique de Madagascar, Bourbon et Maurice, partie des Lépidoptères. Paris, 1834.

GEN. ET. IND. METH. Genera et Index methodicus europæorum Lepidopterorum, Paris, 1840.

IND. METH. Europæorum Lepidopterorum index methodicus. Paris, 1829.

BEAN, Thomas E.

BEAUV. Palisot de Beauvois, A. M. F. J.

INS. AFR. ET AM. Insectes recueillis en Afrique et en Amérique dans les royaumes d'Oware, Saint-Domingue et dans les États Unis pendant les années 1781–1797. Paris, 1805–1821.

BEHR, Dr. Hermann.

BEHRENS, James.

BERLIN. MAG. Berliner Magazin.

BETH. Bethune, Rev. C. J. S.

BEUT. Beutenmüller, William.

BKH. *See* BORKH.

BORKH. Borkhausen, Moriz Balthasar.

NATURG. EUR. SCHMETT. Naturgeschichte der europaeischen Schmetterlinge nach systematischer Ordnung. Frankfurt, 1788–1794. Noctuæ in Vol. IV, 1792.

BRACE, John P.

BREHME, H. H.

BULL. BKLN. ENT. SOC. Bulletin of the Brooklyn Entomological Society. Published by the society, 1877–1884.

BULL. BUFF. SOC. NAT. SCI. Bulletin of the Buffalo Society of Natural Science. Published by the society, Buffalo, N. Y.

BULL. CAL. AC. SCI. Bulletin of the California Academy of Sciences. Published by the academy, San Francisco.

BULL. GEOL. SURV. Bulletin of the United States Geological and Geographical Survey of the Territories, Washington, D. C.

BULL. U. S. NAT. MUS. NO. 38. Bulletin of the United States National Museum, No. 38. Washington, 1890. Revision of Agrotis.

BUNKER, Robert.

BUTLER, Arthur G.

CANADIAN JOURNAL, The. Published in Toronto. New series, Vol. XI, 1865 is the only volume cited.

CAN. ENT. The Canadian Entomologist. Published by the Entomological Society of Ontario at London, Ontario.

CAN. NAT. AND GEOL. The Canadian Naturalist and Geologist, Montreal.

CAULFIELD, F. B.

C. B. MUS., HET. Catalogue of the Lepidoptera Heterocera in the British Museum. 1856–1868. Forming Vols. IX to XXXVI of the Lepidoptera.

CLEM. Clemens, Brackenridge.

CLERCK, Carl Alexander.

ICONES. Icones insectorum variorum cum nominibus eorum trivialibus locisque e C. Linnæi syst. nat. allegatis. Holmiæ, 1759–1764.

COMSTOCK, John Henry.

COTTON INSECTS. Report upon Cotton Insects prepared under the direction of the Commissioner of Agriculture in pursuance of an act of Congress approved June 19, 1878. Washington, D. C., 1879.

COQUILLETT, D. W.

CORR.-BLATT. Correspondenzblatt, für Sammler von Insecten, insbesondere von Schmetterlingen. Regensburg, Manz.

CRAM. Cramer, Pieter.

PAP. EX. Papillons exotiques des trois parties du monde, l'Asie, l'Afrique et l'Amérique, rassemblés et décrits par Pierre Cramer. Dessinés sur les originaux, gravés et enluminés sous sa direction. Amsteldam, Baldé. 1775–1782, Vols. I–IV.

Croft, Henry H.

Curt. Curtis John.

App. to Ross. Narr. 2nd Voy. Description of the insects brought home by Commander James Clark Ross; second voyage. Appendix Nat. Hist., 1831.

Dalm. Dalman, Johann Wilhelm.

Dimmock, A. K., Anna Katherine.

Dodge, G. M.

Dru. Drury, Drew.

Illustr. Illustrations of natural history, wherein are exhibited upwards of two hundred and forty figures of exotic insects according to their different genera, etc. London, 1770–1782.

Duncan, James.

Dup. Duponchel, Philogène Auguste Joseph.

Cat. Méth. Catalogue Méthodique des Lépidoptères d'Europe distribués en familles, tribus et genres, avec l'exposé des caractères, etc. Paris, 1844–1846.

Dyar, Harrison G.

Edw. Edwards, William H.

Ent. Amer. Entomologica Americana; organ of and published by the Brooklyn Entomological Society, 1885–1890, at Brooklyn, N. Y.

Ent. Mo. Mag. The Entomologists' Monthly Magazine, London: Van Voorst.

Ent. News. Entomological News and Proceedings of the Entomological Section of the Academy of Natural Sciences. Published by the Amer. Ent. Soc., Philadelphia.

Entomologist. The Entomologist; an illustrated journal of general entomology, London.

Esp. Esper, Eugen Johann Christoph.

Schmett. Die (Europæischen) Schmetterlinge in Abbildungen nach der Natur mit Beschreibungen. Erlangen, 1771–1794. Noctuids in Pt. IV, 1786. Suppl., 1805–1807.

Fabr. Fabricius, Johann Christian.

Syst. Ent. Systema Entomologiæ sistens Insectorum classes, ordines, genera, species, adjectis synonymis, locis, descriptionibus, observationibus. Flensburgi et Lipsiæ, Korte, 1775.

Gen. Ins. Genera eorumque charactores naturales secundum. numerum, figuram, situm et proportionem omnium partium oris adjecta mantissa specierum nuper detectarum. Chilonii, Bartsch, 1777.

Spec. Ins. Species Insectorum exhibentes eorum differentias specificas, synonyma auctorum, loca natalia, metamorphosin, adjectis observationibus, descriptionibus. Hamburgii et Kilonii, Bohn, 1781.

Mant. Ins. Mantissa Insectorum sistens eorum species nuper detectas adjectis characteribus genericis, differentiis specificis, emendationibus, observationibus. Hafniæ, Proft, 1787.

Ent. Syst. Entomologia systematica emendata et aucta, secundum classes, ordines, genera, species, adjectis synonymis, locis, observationibus, descriptionibus. Hafniæ, Proft. 8, T. III, pars 1 et 2, 1793 and 1794.

Fager, D. B.

Feld. Felder, Cajetan.

Reise der Nov., Zool. Reise der Oesterreichischen Fregatte Novara um die Erde in den Jahren 1857, 1858, 1859. Zoologischer Theil, zweiter Band, 1864–1875.

Fischer, Philip.

Fitch, Dr. Asa.

Rept. Ins. N. Y. Reports on the noxious, beneficial, and other insects of the State of New York. 13 reports, beginning 1855.

Fourth Rept. Ent. Comm. Fourth Report of the United States Entomological Commission. U. S. Department of Agriculture, Washington, 1885.

French, George H.

Cat. Ills. Synopsis of the Catocalæ of Illinois. From the curator's report in the 7th Ann. Rept. of the Principal to the Board of Trustees of the So. Ills. Normal Univ., Carbondale, Ill., 1882

G. and R., or Grt. and Rob. Grote (A. R.) and Robinson (C. T.)

Gentry, Thomas A.

Germ. Germar, Ernst Friedrich.

GEYER CARL. *See* Hübner for Zuträge.

GMEL. Gmelin, Johann, Friedrich.

ED. LINN. SYST. NAT. Systema Naturæ, &c., ed xiii, aucta, reformata cura Joa. Frid. Gmelin, Lipsiæ, 1788–1793. Insects in Vol. I, pts. 4 and 5, 1789.

GN. Guénée, Achille.

ESSAI, sur la classification de noctuélides. In Ann. Soc. Ent. Fr. 1837–1839.

NOCT. IND. METH. Noctuarum Europæarum index methodicus, etc. Ann. Soc. Ent. Fr. 1841, 235–250.

SP. GEN. LEP., NOCT. Species Géneral des Lépidoptéres. Noctuelites, Vols. I–III. Paris, 1852, in the suites à Buffon forming Vols. V–VII of the Lepidoptera.

SP. GEN. LEP., DELT. As before. Deltoides and Pyralites. Paris, 1854. Forms Vol. VIII, of the Lepidoptera.

SP. GEN. LEP., PHAL. As before. Uranides, Phalénites T. i. and ii, Paris, 1857. Forms Vols. IX and X of the series.

GOEZE, Johann August Ephraim.

BEITR. Entomologische Beiträge zu des Ritter Linné zwölften Ausgabe des Natursystems. Leipzig, 1777–1781.

GOODELL, L. W.

GOODHUE, Charles H.

GOSSE, Philip Henry.

CAN. NAT. The Canadian Naturalist, a series of observations on the Natural History of Lower Canada. London. 1840.

GRT. Grote, Augustus Radcliffe.

CHECK LIST NOCT. or LIST NOCT. Check List of the Noctuidæ of America north of Mexico. Buffalo, Reinecke & Zesch. Pt. I, 1875, pt. II, 1876.

NEW LIST. New Check List of North American Moths. 1882.

ILL. ESSAY. An Illustrated Essay on the Noctuidæ of North America, with "A Colony of Butterflies." London, 1882.

REVISED LIST, 1892.

GUÉR. Guérin-Meneville, Fèlix Édouard.

ICON. RÈGNE ANIM. Iconographie du règne animal de G. Cuvier, etc. Paris, 1829–1838.

GUNDLACH, Dr. Juan.

CONT. ENT. CUB. Contribucion Entomologia Cubana. Havannah, 1886.

HARR. Harris, Thaddeus William.

REPT. INS MASS. A report on the insects of Massachusetts injurious to vegetation. Cambridge, 1841–1842.

ENT. CORR. Entomological correspondence of Thaddeus William Harris, M. D. Edited by Samuel H. Scudder. Boston Soc. Nat. Hist. Occasional papers, 1869.

HARR. INJ. INS., FLINT ED. A treatise on some of the insects injurious to vegetation. Edited by Charles L. Flint. New York, 1862.

HARV. Harvey, Dr. Leon F.

HAW. Haworth, Adrian Hardy.

LEP. BRITT. Lepidoptera Brittannica, sistens digestionem novam Insectorum Lepidopterorum quæ in Magna Britannia reperiuntur, etc. London, 1803–1812.

HBN. Hübner, Jacob.

SAMML. EX. SCHMETT., Sammlung exotischer Schmetterlinge. Augsburg, 1806–1824.

SAMML. EUR. SCHMETT. Sammlung europäischer Schmetterlinge. Augsburg, 1806–1824.

VERZEICHNISS. Verzeichniss bekannter Schmetterlinge. Augsburg, 1816. The noctuidæ in the volume were not issued until after 1818.

ZUTRAEGE. Zutraege zur Sammlung exotischer Schmetterlinge, bestehend in Bekundigung einzelner Fliegmuster neuer oder rarer nicht europäischer Gattungen. Augsburg, 1818–1823, 1825–1832 (von Carl Geyer) 1837 (von Carl Geyer).

HFN. Hufnagel.

BERLIN. MAG. Berliner Magazin.

HOCH. von Hochenwarth, Sigmund.

H. SCH. Herrich-Schaeffer, Gottlieb August William.

EUR. SCHMETT. or SCHMETT EUR. Systematische Bearbeitung der Schmetterlinge von Europa, als Text, Revision und Supplement zu J. Hübners Sammlung europäischer Schmetterlinge. Regensburg, Manz., 1843–1856. Noctuids, Vol. II, 1845.

H. Sch. Herrich-Schaeffer, Gottlieb August William—Continued.

Exot. Schmet, or Lepid. Exot. Lepidopterorum exoticorum species novæ aut minus cognitæ. Collection de nouvelles espèces de Papillons exotiques. Ratisbonæ, 1850–1858.

Neue Schmett. Eur. Neue Schmetterlinge aus Europa und den angrenzenden Ländern. Regensburg, 1856.

Hulst, George D.

Humph. Brit. Moths. British moths and their transformations. Arranged and illustrated in a series of plates by Henry W. Noel Humphreys. London, 1857.

Hy. Edw. Edwards, Henry.

Insect Life. Devoted to the economy and life habits of insects, especially in their relations to agriculture. Periòdical bulletin of the Division of Entomology, United States Department of Agriculture. Washington, D. C.

Jardine Nat. Libr. The Naturalist's Library, by Sir William Jardine. Edinburgh. Lepidoptera, 1835–1841.

Johnston, James.

Kellicott, David.

Kirby, William.

Fn. Bor. Amer. Fauna boreali-Americana, or the zoölogy of the northern parts of British America, containing descriptions of the objects of natural history collected on the late northern land expeditions under command of Sir John Franklin. Part iv, The Insects, 1837.

Koebele, Albert.

Latr. Latreille, Pierre André.

Gen. Crust. et Ins. Genera crustaceorum et insectorum secundem ordinem disposita, iconibus exemplisque plurimus explicata. Paris, 1806–1809.

Consid. Gén. des Crust. et Ins. Considérations générales sur l'ordre natural des animaux composant les classes des Crustacés, des Arachnides et des Insectes, avec un tableau méthodique de leurs genres disposés en famillies. Paris, 1810.

Led. Lederer, Julius.

Noct. Eur. Die Noctuinen Europas, mit Zuziehung einiger bisher meist dazu gezählten Arten des asiatischen Russlands, Kleinasiens, Syriens u. Labradors. Wien, 1857.

Lefb. Lefebure, Alexandre.

Linn. or Linné. Linné, Carl von.

Fn. Suec. Fauna Suecica sistens animalia Sueciæ regni. Quadrupedia, Aves, etc. Editio altera auctior. Stockholmiæ, 1761.

Syst. Nat., Ed. X. Systema Naturae per regna tria naturae secundum classes, ordines genera, species, cum characteribus, differentiis, synonymus, locis, ed.decima reformata, Holmiae I, 1758; II, 1759.

Syst. Nat., ed. XII. Systema naturae per regna tria naturae secundum classes, ordines, genera, species. cum characteribus. differentiis, synonymis, locis, ed. duodecima reformata. Holmiae, I, 1766, II, 1767, III, 1768.

Mus. L. U. Museum S. R. M. Ludovicae Ubricae Reginae, etc., in quo animalia rariora, exotica, inprimis insecta et conchilia describuntur et determinantur, prodromi instar editum. Holmiae, 1764.

Lint. or Lintn. Lintner, James Albert.

Ent. Cont. Entomological contributions, I–IV, from the reports on the New York State Cabinet of Natural History. Albany, N. Y. I, Vol. xxiii, 1872; II, Vol. xxiv, 1872: III, Vol. xxvi, 1874; IV, Vol. xxx, 1878.

The paging cited is that of the separates; I and IV are paged separately, II and III as in the reports.

Lucas, Hippolyte.

Mead, Theodore L.

Meigen, Johann Wilhelm.

Syst. Beschr. Schmetr. Eur. Systematische Beschreibung der europäischen Schmetterlinge. Aachen, 1827–1832.

Mén. Ménétriés, E.

Schrenk's Reisen. Schrenk Reisen u. Forschungen im Amurlande. Lepidoptera, Petersburg, 1859.

Meyer, Julius.

Minot, Charles Sedgwick.

MOESCHL. Moeschler, Henrich Benno.

MOFFAT, J. Alston.

MOORE, Frederick.

MORR. Morrison, H. K.

N. B. L. Nomen bis lectum. Indicates that the name is preoccupied.

NEUM. Neumoegen, Berthold.

NO. AM. ENT. The North American Entomologist. Buffalo, N. Y. Reinecke & Zesch, 1879-80. One volume only.

OCHS. Ochsenheimer, Ferdinand.

SCHMETT. EUR. Die Schmetterlinge von Europa. Leipzig, 1807-1816. The systema glossatorum is in Vol. IV, 1816.

OLIV. Olivier, Antoine Guillaume.

ENC. METH. Encyclopédie méthodique, dictionnaire des insectes. Paris, 1789-1791 et 1825. Vol. VIII. containing the Noctuids, 1811-1812.

PACIFIC COAST LEP. Pacific Coast Lepidoptera; a series of papers under this title published in the Proc. Cal. Ac. Sci., by Henry Edwards A few of the later as separates only.

PACK. Packard, Alpheus Spring.

GUIDE. Guide to the Study of Insects. 6th edition. New York, Henry Holt & Co., 1878.

PAPILIO, organ of and published by the New York Entomological Club, 1881-1884.

PEARSALL, Richard F.

PILATE, G. R.

PROC. AC. NAT. SCI. PHILA. Proceedings of the Academy of Natural Science of Philadelphia. Published by the Academy.

PROC. AM. PHIL. SOC. Proceedings of the American Philosophical Society, Philadelphia. Published by the Society.

PROC. BOST. SOC. N. H. Proceedings of the Boston Society of Natural History. Published by the Society at Boston, Mass.

PROC. CAL. AC. SCI. Proceedings of the California Academy of Sciences, San Francisco. Published by the Academy.

PROC. DAV. AC. SCI. Proceedings of the Davenport Academy of Sciences. Published by the Academy, Davenport, Iowa.

PROC. ENT. SOC. PHIL. Proceedings of the Entomological Society of Philadelphia. Published by the Society, and succeeded by the Trans. Am. Ent. Soc.

PROC. U. S. NAT. MUS. Proceedings of the United States National Museum, Washington, D. C.

PROC. ZOÖL. SOC. Proceedings of the Zoölogical Society of London. Published by the Society.

PR. SYN. A synonym of the preceding good species.

PSYCHE. Organ of and published by the Cambridge Entomological Club, Cambridge, Mass.

PUT. CRAM. Putman-Cramer, A. W.

REPT. CHIEF ENG. Annual report upon explorations and surveys in the department of the Missouri by E. H. Ruffner, First Lieut. Eng., U. S. A., being Appendix RR. of the annual report of the Chief of Engineers for 1877. Washington, D. C., 1878.

REPT. PEAB. AC. SCI. APP. Annual report of the Peabody Academy of Science—Appendix. Salem, Mass. Published by the Academy. The Appendix contains the descriptive papers.

RILEY, Charles Valentine.

REPT. INS. MO. Annual report on the noxious, beneficial, and other insects of the State of Missouri. 1869-1877. Nine reports. Jefferson City, Mo.

INDEX AND SUPPLT. TO MO. REPTS. General index and supplement to the nine reports on the insects of Missouri. Bulletin No. 6, U. S. Entomological Commission, 1881.

ROB. Robinson, Coleman T.

ROTT. Von Rottenburg, S. A.

NATURF. Naturforscher, Noct., 1776, pp. 111-144.

S. & A. Smith (James Edward) and Abbott (John).

Ins. Ga. The Natural History of the rarer Lepidopterous insects of Georgia, collected from the observations of John Abbott, with the plants on which they feed. London, 1797.

Sagra's Cuba. Ramon de la Sagra. Historia fisica, politica y natural de la Isla de Cuba. Secunda parte: Historia natural: Tom. VII. Crustaceos, Aragnides é Insectos. Paris, 1856. Lepid., pp. 202–313 by Lucas.

Sanb. Sanborn, F. G.

Saund. Saunders, William.

Fruit Ins. Insects injurious to fruits. Philadelphia: Lippincott & Co., 1883.

Say, Thomas.

American Ent., Lec. ed. The complete writings of Thomas Say on the Entomology of North America. Edited by John L. LeConte, New York, 1859.

Schrank, Franz von Paula.

Fn. Boica. Fauna Boica. Nurenberg, 1798–1804, Vols. III, in pts. 6.

Smith, John B.

List Lep. Bor. Am. List of the Lepidoptera of Boreal America: Philadelphia, American Entomological Society, 1891.

Snellen, P. C. T.

Soule & Eliot. Soule, Caroline G., and Eliot, Ida M.

Speyer, Adolph

Staud. Staudinger, O.

Cat. Lep. Eur. Catalog der Lepidopteren des europäeischen Faunengebiets, Dresden, 1871.

Steph. Stephens, James Francis.

Ill. Brit. Ent., Haust. Illustrations of British Entomology, or a synopsis of indigenous insects, containing their generic and specific descriptions, with an account of their metamorphoses, time of appearance, localities, food and economy, as far as practicable, with colored figures (from Westwood) of the rarer and more interesting species. Haustellata ii, iii, 1829.

Stett. Ent. Zeit. Entomologische Zeitung, herausgegeben von dem Entomologischen Verein zu Stettin.

Stgr. *See* Staud.

Stretch, Richard H.

Zyg and Bomb. Illustrations of the Zygænidæ and Bombycidae of North America. San Francisco, author, 1872–1873.

Strk. or **Strck.** Strecker, Hermann

Lep. Rhop. et Het. Lepidoptera, Rhopaloceres and Heteroceres, Indigenous and exotic, with descriptions and colored illustrations. Reading, Pa., author, 1872–1878.

Sub nom. Under the name of.

S. V. Schiffermüller, Ignaz.

Systematisches Verzeichness der Schmetterlinge der Wiener Gegend, Wien, 1776.

Tausch. Tauscher, A. M.

Tepper, Fred.

Thaxter, Roland.

Thunb. Thunberg, Carl Peter.

Mus. Nat. Ac. Ups. Diss. Museum naturalium Academiæ Upsaliensis. Dissert., 1787–1788.
Diss. Ent. Dissertatio Entomologica novas insectorum species sistens. Upsaliæ, 1781–1791.
Ins. Suec. Dissertatio Entomologica sistens Insecta Suecica. Upsaliæ, 1784–1795.

Tijdschr. voor Entom. Tijdschrift voor Entomologie uitgegeven door de Nederlandsche Entomologische Vereeniging. 's Gravenhage.

Tr. Treitschke, Friedrich.

Schmett. Eur. Die Schmetterlinge von Europa, vol. V, 1825. Leipzig. A continuation of Ochsenheimer's work; vol. V includes the Noctuidæ and is the only volume cited here.

Trans. Am. Ent. Soc. Transactions of the American Entomological Society. Published by the society. Philadelphia. Succeeds the Proc. Ent. Soc., Philadelphia.

Trans. Ent. Soc. Lond. Transactions of the Entomological Society of London. Published by the society.

Trans. Kans. Ac. Sci. Transactions of the Kansas Academy of Science. Topeka. Published by the Academy.

TRANS. NOV. SC. INST. NAT. SCI. Transactions of the Nova Scotia Institute of Natural Sciences. Published by the Institute.

VERH. K. K. ZOOL.-BOT. GES. Verhandlungen der koenig.-kaiserlichen zoologisch-botanischen Gesellschaft in Wien. Published by the society. Vienna.

VETENSK. ACAD. HANDL. Kongl. Vetenskaps Academiens Handlingar, Stockholm. Published by the Academy.

WALLENG. *See* WALLGR.

WALLGR. Wallengren, H. D. J.

WEEKS, Archibald C.

WESTW. Westwood, John Obadiah.

WESTW. ED. DRU. Drury, illustrations, etc., q. v. Edited by J. O. Westwood, London, 1837–1842.

WHEELER'S REPT. SURV. WEST 100 MERID. Report upon geographical and geological explorations and surveys west of the 100th meridian, in charge of First Lieut. George M. Wheeler, Corps of Engineers, U. S. Army, under the direction of Brig. Gen. A. A. Humphreys, Chief of Engineers, U. S. Army. Washington, D. C., 1875.

WIEN. ENT. MONATSCHR. Wiener Entomologische Monatschrift. Vienna. Not a society publication.

WLK. Walker, Francis.

WOOD, William.

INDEX ENT. Index Entomologicus, or a complete illustrated catalogue of the Lepidopterous insects of Great Britain, consisting of 1,946 figures. London, 1833–1839.

WORTH. Worthington, C. E.

W. V. Wiener Verzeichniss. See S. V.

ZELL. Zeller, Philipp Christoph.

ZETT. Zetterstedt, Johann Wilhelm.

INS. LAP. Insecta Lapponica descripta. Lipsiæ, 1840. The Lepidoptera appeared in 1839.

CATALOGUE.

Family THYATIRIDÆ.

Genus **THYATIRA** Ochs.
1816. Ochs., Schmett. Eur., IV, 77.

T. scripta Gosse.*

1840. Gosse, Canadian Naturalist, 249, *Thyatira.*
1856. Wlk., C. B. Mus., Het., IX, 6, *Gonophora.*
1863. Grt., Proc. Ent. Soc. Phil., II, 58, *Gonophora.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 77, *Habrosyne.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 129, *Habrosyne.*
1875. Speyer, Stett. Ent. Zeit., XXXVI, 108, *Thyatira.*
1881. Grt., Can. Ent., XIII, 152, *Habrosyne.*
1883. Thaxter, Papilio, III, 10, larva on raspberry.
abrasa Gn.
1852. Gn., Spec. Gen. Noct., I, 12, pl. 3, f. 2, *Thyatira.*
1856. Wlk., C. B. Mus., Het., IX, 6, pr. syn.
1863. Grt., Proc. Ent. Soc. Phil., II, 58, pr. syn.
derasa ‡ Edw.
1873. Edw., Proc. Cal. Ac. Sci., V, 189, *Thyatira.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 5, pr. syn.

HABITAT.—United States generally, northward to Alaska. Northern States in June; British Columbia, July and August.

I refer this species to *Thyatira* because I have not been able to find any essential differences between it and *batis*. The type of maculation is quite distinct, but does not suffice for generic separation. In the Edwards collection there is an Alaskan specimen, and in the British Museum one from Hudson Bay Territory, which indicate a new species. They are much darker in color, and in the course of the t. a. line agree with *derasa* rather than with *scripta*.

Genus **EUTHYATIRA** Smith.
1891. Smith, List Lepidoptera 34.

E. lorata Grt.

1881. Grt., Papilio, I, 75, *Thyatira.*
1882. Grt., Ill. Essay, 48, pl. I, f. 2, *Thyatira.*
1891. Smith, List Lepidoptera, 34, *Euthyatira*

HABITAT.—Washington.

The type is in Mr. Neumœgen's collection. In proposing the genus *Euthyatira* for the two species here associated, I wish to express my conviction that the American species heretofore referred to *Thyatira* are not at all congeneric with *batis*, the type of the genus. There is a certain similarity in the type of maculation, but none in wing form or in other details.

E. pudens Gn.*

1852. Gn., Spec. Gen., Noct. I, 13, pl. III, f. 1, *Thyatira.*
1856. Wlk., C. B. Mus., Het., IX, 8, *Thyatira.*
1874. Strk., Lep. Rhop. et Het., 79, *Thyatira.*
1889. Dyar, Can. Ent. XXI, 209, larva.
1891. Smith, List Lepidoptera, 34, *Euthyatira.*
anticostiensis Grt.

HABITAT.—Pennsylvania, northward to Labrador; Anticosti; Newfoundland; Canada in May; New York in July.

The type of *pudens* is in the British Museum. I can not find that *anticostiensis* has been characterized except by name in Mr. Grote's list of 1890.

Genus **PSEUDOTHYATIRA** Grt.

1864. Grt., Proc. Ent. Soc. Phil., III, 539.

P. cymatophoroides Gn.*

1852. Gn., Spec. Gen. Noct., I, 13, *Thyatira.*
1856. Wlk., C. B., Mus., Het., IX, 8, ? *Thyatira.*
1863. Grt., Proc. Ent. Soc. Phil., II, 58, *Lacinia.*
1863. Grt., Proc. Ent. Soc. Phil., II, 134, *Lacinia.*
1863. Grt., Proc. Ent. Soc. Phil., II, 337, *Lacinia.*
1864. Grt., Proc. Ent. Soc. Phil., III, 539, *Pseudothyatira.*
1875. Morr., Psyche, I, 41, *Pseudothyatira.*
1881. Grt., Can. Ent. XIII, 152, *Pseudothyatira.*
1883. Thaxter, Papilio, III, 10, larva on red oak.
var. expultrix, Grt.
1863. Grt., Proc. Ent. Soc. Phil., II, 58, pl. II, f. 6, *Lacinia.*
1863. Grt., Proc. Ent. Soc. Phil., II, 134, larva.
1863. Grt., Proc. Ent. Soc. Phil., II, 337, an sp. dist. pr.
1864. Grt., Proc. Ent. Soc. Phil., III, 539, an sp. dist. pr.
1882. Grt., New List, 22, an var. pr.
cymatophoroides ♀ Gn.
1852. Gn., Spec. Gen., Noct., I, 14, *Thyatira.*
1856. Wlk., C. B., Mus., Het., IX, 8, var. β.
1863. Grt., Proc. Ent. Soc. Phil., II, 58, =*expultrix.*
1873. Hy. Edw., Proc. Cal. Ac. Sci., V, 189, *Thyatira.*

HABITAT.—West Virginia; Pennsylvania, northward to Nova Scotia; British Columbia; Colorado; New Mexico; Canada, June and July; New York, May, July, August.

The types are in the British Museum, both of the species and the variety. In the museum of the Boston Society of Natural History a specimen in the Harris collection is marked *Noctua cinguluta.*

Genus **BOMBYCIA** Hbn.

1816. Hübner, Tentamen.

I follow Mr. Grote in the use of this Hübnerian term, because *Cymatophora* has been used in the Geometridæ, and the term has become confusing. It is quite certain that our species are not congeneric; but all are very rare, and I have never had any material for study.

B. improvisa Hy. Edw.

1873. Hy. Edw., Proc. Cal. Ac. Sci., v, 189, *Cymatophora.*
1874. Grt., Can. Ent., vi, 151, *Bombycia.*
1875. Grt., Bull. Buff. Soc. Nat. Sci., iii, 78, *Bombycia.*
1876. Grt., Stett. Ent. Zeit., xxxvii, 134, *Bombycia.*
1881. Grt., Papilio, i, 76, *Bombycia.*

HABITAT.—Washington.

The type is in the Edwards collection.

B. semicircularis Grt.

1881. Grt., Papilio, i, 75, *Bombycia.*
1882. Grt., Ill. Essay, 48, pl. i, f. 1, *Bombycia.*

HABITAT.—Washington.

The type is in the Neumoegen collection.

B. tearlii Hy. Edw.*

1886. Hy. Edw., Ent. Amer., ii, 11, *Gluphisia.*
1888. Hy. Edw., Ent. Amer., iv, 63, *Bombycia.*
1891. Smith, List Lepidoptera, 34, *Bombycia.*

HABITAT.—California, September and October.
The type is in the Edwards collection.

B. magnifica Strk.

1876. Strk., Proc. Ac. Nat. Sci. Phil., xxviii, 151, *Cymatophora.*
1891. Smith, List Lepidoptera, 34, *Bombycia.*

HABITAT.—Florida.
Mr. Strecker probably has his own type.

B. candida Smith.

1890. Smith, Ent. Amer., vi, 179, *Bombycia.*

HABITAT.—Florida.
The type is in Mrs. Slosson's collection.

B. caniplaga Wlk.

1856. Wlk., C. B. Mus., Het., ix, 18, *Cymatophora.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., ii, 5, *Bombycia.*

HABITAT.—Canada.
The type is in the Saunders collection at Oxford, England. A figure sent me by Mr. Schaus proves it to be=*Edema transversata* Wlk.=*Ellida gelida* Grt.

Genus **LEPTINA**, Gn.

1852. Gn., Spec. Gen. Noct., I, 14.

The types of all the species in this genus, with the exception of *latebricola*, Grt., are in the British Museum. *Latebricola* type, is in the collection of the American Entomological Society, and is, as Mr. Grote suggests, the same as *dormitans.* On the other hand, *australis* is not, as I had supposed from specimens named by Mr. Grote, the same as *ophthalmica*, but probably a good species. Mr. Grote has mixed varietal forms of Guenée's species with his own. As the matter stands now, after studying all the types, the species divide as follows:

Shoulders and base of primaries concolorous.......................DORMITANS.
Shoulders and base of primaries white.
  Median lines complete, even, white ....DOUBLEDAYI.
  T. p. line incomplete, reniform distinct.......................OPHTHALMICA.
  T. p. line wanting, reniform wanting...........................AUSTRALIS.

L. dormitans Gn.*

1852. Gn., Spec. Gen., Noct., I, 15, *Leptina.*
1856. Wlk., C. B. Mus., Het., IX, 10, *Leptina.*
1863. Grt., Proc. Ent. Soc. Phil., II, 57, *Leptina.*
latebricola Grt.
1863. Grt., Proc. Ent. Soc. Phil., II, 57, *Leptina.*
1881. Grt., Can. Ent., XIII, 152, *Leptina.*
1890. Grt., Revised Check List, 1, ? pr. syn.

Habitat.—Canada; Maine; Rhode Island; New York; New Jersey; Wisconsin.

L. doubledayi Gn.*

1852. Gn., Spec. Gen., Noct., I, 15, *Leptina.*
1856. Wlk., C. B. Mus., Het., IX, 10, *Leptina.*
1863. Grt., Proc. Ent. Soc. Phil., II, 58, *Leptina.*

Habitat.—Maine; Massachusetts in June; New York; Pennsylvania.

L. ophthalmica Gn.*

1852. Gn., Spec. Gen., Noct., I, 15, pl. 3, f. 6, *Leptina.*
1856. Wlk., C. B. Mus., Het., IX, 10, *Leptina.*
1863. Grt., Proc. Ent. Soc. Phil., II, 57, *Leptina.*

Habitat.—New York in June; Massachusetts in June; Wisconsin.

L. australis Grt. *

1881. Grt., Can. Ent., XIII, 152, an var., *ophthalmica.*
1882. Grt., New List, 22, an spec. dist.
1891. Smith, List Lepidoptera, 34=*ophthalmica*

Habitat.—Texas, Alabama.

Family NOCTUIDÆ.

Genus **PANTHEA** Hbn.

1816. Hübner, Verzeichniss, 203.

I use this term to replace *Audela*, *Platycerura*, and in part *Charadra* as used by Mr. Grote. The species are structurally identical with the European *cœnobita*, and one species—*acronyctoides*—has also practically the same type of markings.

P. acronyctoides Wlk.

1861. Wlk., Can. Nat. and Geol., VI., 37, *Audela*.
1877. Grt., Can. Ent., IX, 27, *Audela*.
1878. Grt., Bull. Geol. Surv., IV, 169, *Audela*.
1891. Smith, List Lepidoptera, 34, *Panthea*.
eucomelana Morr.
1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 428, *Panthea*.
1878. Grt., Bull. Geol. Surv., IV, 169, pr. syn.

HABITAT.—Canada; River Rouge in June; Maine; Massachusetts; New York; Wisconsin.

Mr. Morrison's type is in the Tepper collection; Mr. Walker's is in the collection of the Entomological Society of Ontario, *fide* Grote. The references were made by Mr. Grote after seeing both types.

P. furcilla Pack.

1861. Pack., Proc. Ent. Soc. Phil., III, 371, *Platycerura*.
1873. Stretch, Zyg. & Bomb., 230, pl. 9, f. 15, *Platycerura*.
1874. Lint., Ent., Cont., III, 131 f. 7, larva.
1881. Grt., Bull. Geol. Surv., VI, 258, 277, *Platycerura*.
1883. Thaxter, Papilio, III, 11, larva.
1891. Smith, List Lepidoptera, 31, *Panthea*.

HABITAT.—Canada; Eastern and Middle States; Minnesota; New York in June.

The type of this species is in the Museum of Comparative Zoölogy at Cambridge.

P. gigantea French.

1890. French, Can. Ent., XXII, 134, *Platycerura*.
1891. Smith, List Lepidoptera, 31, *Panthea*.

HABITAT.—Colorado, Texas.

Prof. French has his own type. I had seen specimens in the Edwards collection, but had considered them local forms of *furcilla*.

P. palata Grt.

1880. Grt., Can. Ent., XII, 258, *Charadra*.
1881. Grt., Papilio, I, 153, *Charadra*.
1891. Smith, List Lepidoptera, 31, *Panthea*.

HABITAT.—Colorado; Arizona.

The type is in the British Museum. Mr. Butler has it under *Platycerura*.

Genus **DEMAS** Steph.

1829. Steph., Ill. Br. Ent., Haust., II, 59.

D. propinquilinea Grt.*

1873. Grt., Trans. Am. Ent. Soc., IV, 293, *Charadra.*
1881. Goodell, Papilio, I, 15, larva.
1885. Dimmock, A. K., Psyche, IV, 274, larva.
flavicornis Smith.
1884. Smith, Bull. Bkln. Ent. Soc., VII, 3, *Demas.*

HABITAT.—Maine in July; Massachusetts in June; Rhode Island and New York in May and July; New Jersey in May.

Mr. Grote's type is in the British Museum, and is, as I have for some time suspected, my *flavicornis*, the type of which is with Mr. Graef. I had seen *propinquilinea*, I believe, in Mr. Thaxter's collection, but the specimens were very much more sharply marked than the one which became my type. My generic reference holds good.

Genus **RAPHIA** Hbn.

1816. Hbn., Verzeichniss, 212.

R. abrupta Grt. *

1863. Grt., Proc. Ent. Soc. Phil., II, 336, pl. 8, f. 3, *Raphia.*

HABITAT.—Canada, in June, to Texas; Colorado.

The type is in the British Museum.

R. frater Grt.*

1863. Grt., Proc. Ent. Soc. Phil., II, 435, pl. 9, f. 7, *Raphia.*
1883. Thaxter, Papilio, III, 13, larva on poplar.
personata Wlk.
1865. Wlk., C. B. Mus., Het., XXXII, 606, *Saligena.*
1868. G. and R., Trans. Am. Ent. Soc., II, 86, pr. syn.
var **coloradensis** Put. Cram.*
1886. Cramer, Ent. Amer., II, 142, *Raphia.*
pallula Hy. Edw.
1886. Hy. Edw., Ent. Amer., II, 168, *Raphia.*
1891. Smith, List Lepidoptera, 34, pr. syn.

HABITAT.—Canada to Texas: Colorado; Northern States, and Canada in June and July.

The Grote and Walker types are in the British Museum. Mr. Cramer's type is in the Doll collection, and the type of *pallula* is in the Edwards collection. I have seen all the types and the above synonymy is correct, I believe. The *Raphia onychina* Gn., was described as *Epunda*, referred to *Raphia* by Walker and to *Cleoceris* by Grote. This has resulted in a duplication of the name in my list of Lepidoptera.

Genus **CHARADRA** Wlk.

1865. Wlk., C. B. Mus., Het., XXXII, 445.

C. deridens Gn.*

1852. Gn., Spec. Gen., Noct., I, 35, pl. 3, f. 8, *Diphtera.*
1856. Wlk., C. B. Mus., Het., IX, 36, *Diphtera.*

1868. G. and R., Trans. Am. Ent. Soc., II, 86, *Charadra.*
1870. Saund., Can. Ent., II, 145, larva.
1874. Lint., Ent. Cont., III, 157, f. 12, larva.
1883. Thaxter, Papilio, III, 11, life hist.
1885. Dimmock, A. K., Psyche, IV, 274, on *Betula.*
circulifera Wlk.
1857. Wlk., C. B. Mus., Het., XI, 709, *Acronycta.*
1868. G. and R., Trans. Am. Ent. Soc., II, 78, pr. syn.
1882. Grt., Ill. Essay, 39, pr. syn.
contigua Wlk.
1865. Wlk., C. B. Mus., Het., XXXII, 446, *Charadra.*
1868. G. and R., Trans. Am. Ent. Soc., II, 86, pr. syn.

HABITAT.—Canada to Georgia, Florida and Texas; Colorado; New York in May; Maine and Massachusetts in July; Canada in February.

All the types are in the British Museum, and have been already correctly referred by Messrs. Grote and Robinson.

C. dispulsa Morr.*

1874. Morr., Proc. Bost. Soc., N. H., XVII, 213, *Charadra.*
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 4, *Charadra.*

HABITAT.—Texas in March, May, June, August, October.

I do not know where the type is to be found; the species is well known.

C. decora Morr.

1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 55, *Charadra.*

HABITAT.—California.

I do not know this species, which must be a striking one from the description. Mr. Grote has for some reason omitted it from all his lists.

Genus **FERALIA** Grt.

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 58.

F. jocosa Gn.*

1852. Gn., Spec. Gen., Noct., I, 37, *Diphtera.*
1856. Wlk., C. B. Mus., Het., IX, 56, *Diphtera.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 58, *Feralia.*
1875. Grt., Stett. Ent. Zeit., XXXVI, 195, *Feralia.*
1883. Grt., Can. Ent., XV, 28, *Feralia.*
fallax ‡ G. and R.
1868. G. and R., Trans. Am. Ent. Soc., II, 77, *Moma.*

HABITAT.—New Hampshire; New York; New Jersey in March.

The type is in the British Museum.

F. februalis Grt.

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 60, *Feralia.*
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 310, *Arthrochlora.*
1875. Grt., Stett. Ent. Zeit., XXXVI, 197, *Arthrochlora.*

HABITAT.—California.

Types are in the British Museum and in the Edwards collection.

F. major Smith.*

1890. Smith, Ent. Amer., VI, 26. *Feralia.*

HABITAT.—New Hampshire; Plattsburg, New York, April and May; District of Columbia.

Types are in the National Museum.

Genus **MOMOPHANA** Grt.

1875. Grt., Stett. Ent. Zeit., XXXVI, 195.

M. comstocki Grt.

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 59, *Feralia.*
1875. Grt., Stett. Ent. Zeit., XXXVI, 195, *Momophana.*

HABITAT.—New York in May; Canada.

The type is with Prof. Comstock at Ithaca, N. Y.

Genus **MOMA** Hbn.

1816. Hbn., Verzeichniss, 203.

M. fallax H. Sch.*

1853. H. Sch., Exot. Schmett., 80, f. 211, *Moma.*
1856. Wlk., C. B. Mus., Het., IX, 35, *Diphtera.*
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 213, *Diphthera.*
1881. Grt., Bull. Geol. Surv., VI, 277, *Diphthera.*
1882. Smith, Bull. Bkln. Ent. Soc., V, 43, *Moma.*

HABITAT.—Canada in July; New York, in July and August, to District of Columbia; Tennessee; Illinois; Texas in March, April, July.

I do not know where the type of this species can be found.

Genus **ARSILONCHE** Led.

1857. Lederer, Noct. Eur., 70.

A. albovenosa Goeze.*

1781. Goeze, Ent. Beitr., III, 3, p. 251, *Noctua.*
1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 428, *Arsilonche.*
1876. Harv., Can. Ent., VIII, 35. *Arsilonche.*
1880. Coquillett, Can. Ent., XII, 44, larva on *Polygonum.*
1883. Grt., Can. Ent., XV, 30. *Arsilonche.*
1887. Hy. Edw., Ent. Amer., III, 168, larva on *Polygonum.*

ab. **fumosum** Morr.

1873. Morr., Bull. Buff. Soc. Nat. Sci., I, 275, *Arsilonche.*
1875. Morr., Proc. Ac. Nat. Sci., Phil., 1875, 428, *Arsilonche.*

var. **henrici** Grt.

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 10, *Leucania.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 152, Pl. I, f. 15, *Ablepharon.*
1875. Thaxter, Psyche, I, 188, larva on grass.
1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 428, pr. syn.
1883. Grt., Can. Ent., XV, 30, *Arsilonche*, sp. dist. pr.

var. **evanidum** Grt.

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 10, *Leucania.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 112, Pl. I. f. 16, *Ablepharon.*
1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 428, pr. syn.

HABITAT.—Canada in May and June; Northern, Eastern, Middle, and Central States; Massachusetts in April; Kansas and California in January.

Mr. Morrison's type is in the Tepper collection. Mr. Grote's types I have not seen. They may be in the British Museum; but if so I overlooked them. The species has not been critically studied, and the true relation of the forms is yet in doubt. The American form may yet prove distinct, though a very close ally to the European insect. I am not nearly so ready to believe in the identity of European and American species as I once was.

Genus **MEROLONCHE** Grt.

1882, Grt., Ill. Essay, 50.

In this genus and in the following, from which the present has been separated, I have few original notes. Dr. Riley has been accumulating material for several years past for a critical and revisional monograph of the species, and what little I have done is in his hands. Dr. Riley has made comparisons in the European museums, and I did not, therefore, look over the species except as they came accidentally under my notice. So, too, I have given the location of the types only where they are in American collections of which I had notes, or where I accidentally noted the fact. The bibliography, however, is as nearly complete as in most other genera.

M. spinea Grt.

1876. Grt., Bull. Buff. Soc. Nat. Sci., III, 78, *Apatela.*
1878. Hy. Edw., Pac. Coast Lep., No. 27, 3, *Acronycta*; larva.
1882. Grt., Ill. Essay, 50, *Merolonche.*
1883. Grt., Papilio, III, 112, *Merolonche.*

HABITAT.—California; Colorado.

The type is in the Edwards collection.

M. lupini Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 79, *Apatela.*
1876. Grt., Bull. Buff. Soc. Nat. Sci., III, 78, *Apatela.*
1882. Grt., Ill. Essay, 50, *Merolonche.*
1883. Grt., Papilio, III, 112, *Merolónche.*

HABITAT.—California.

The type is in the Edwards collection.

Genus **ACRONYCTA** Ochs.

1816. Ochs., Schmett., IV. 62.

A. occidentalis G. & R.*

1866. G. & R., Proc. Ent. Soc. Phil., VI, 16, *Acronycta.*
1872. Saund., Can. Ent., IV, 49, larva.
1875. Speyer, Stett. Ent. Zeit., XXXVI, 108, *Acronycta.*
1876. Grt., Ann. Lyc. Nat. Hist., N. Y., XI, 302, *Apatela.*
1882. Packard, Papilio, II, 181, larva.
1883. Grt., Papilio, III, 67, *Apatela.*

1883. Hy. Edw., Papilio, III, 132, larva.
1885. Dimmock, A. K., Psyche, IV, 274, larva.
psi ‡ Gn.
1852. Gn., Spec. Gen., Noct., I, 43, *Acronycta*.
1856. Wlk., C. B. Mus., Het., IX, 42, *Acronycta*.
1866. G. & R., Proc. Ent. Soc. Phil., VI, 16, pr. syn.

HABITAT.—Canada to Virginia; Central States; Illinois in August.

In the Harris collection are specimens of this species marked *sagittaria* Harr., and dated, respectively, April 25, May 25, and June 1. It has been taken in Canada from May to August, and in New York to September.

A. morula G. & R.*

1868. G. & R., Trans. Am. Ent. Soc., II, 196, Pl. III, f. 75, *Acronycta*.
1878. Lintner, Ent. Cont., IV, 137, larva.
1883. Thaxter, Papilio, III, 13, larva.
1883. Grt., Papilio, III, 67, *Apatela*.
spinigera ‡ Wlk.
1856. Wlk., C. B. Mus., Het., IX, 55, *Acronycta*.
1882. Grt., Ill. Essay, 39, pr. syn.
ulmi Harr.
1869. Harris, Ent. Corr., by Scudder, 312, Pl. III, f. 10, larva.
1891. Smith, List Lepidoptera, 35, pr. syn.

HABITAT.—Canada to Virginia, west to the Mississippi Valley; Wisconsin; Minnesota; Canada in June and July; New York in July.

In the Harris collection the specimen marked *ulmi* is *morula* G. & R. It is labeled "Imago, June 11, 1850."

A. lobeliæ Gn.*

1852. Gn., Spec. Gen., Noct., I, 44, *Acronycta*.
1856. Wlk., C. B. Mus., Het., IX, 54, *Acronycta*.
1881. Coquillett, Papilio, I, 6, larva.
1883. Grt., Papilio, III, 68, *Apatela*.
1886. French, Can. Ent., XVIII, 118, larva.

HABITAT.—Canada to Middle, Southern, and Central States; Canada and New York in June and July; Minnesota in August; Texas in March and April; New Jersey in June and August.

A. hasta Gn.*

1852. Gn., Spec. Gen., Noct., I, 45, *Acronycta*.
1856. Wlk., C. B. Mus., Het., IX, 54, *Acronycta*.
1883. Grt., Papilio, III, 67, *Apatela*.

HABITAT.—Middle and Eastern States; Canada in June; Delaware in March and May.

A. telum Gn.

1852. Gn., Spec. Gen., Noct., I, 45, *Acronycta*.
1856. Wlk., C. B. Mus., Het., IX, 54, *Acronycta*.
1883. Grt., Bull. Geol. Surv., VI, 571, *Apatela*.

HABITAT.—"Am. Sept."

This species has not been identified in American collections so far as I know.

A. furcifera Gn.*

1852. Gn., Spec. Gen., Noct., I, 44, *Acronycta.*
1856. Wlk., C. B. Mus., Het., IX, 51, *Acronycta.*
1883. Grt., Papilio, III, 68, *Apatela.*

HABITAT.—New York to Florida, to Illinois.

A. thoracica Grt.

1880. Grt., No. Amer. Ent., I, 94, *Apatela.*
1883. Grt., Papilio, III, 68, *Apatela.*

HABITAT.—Colorado; New Mexico.

A. dentata Grt.*

1875. Grt., Can. Ent., VII, 222, *Apatela.*

HABITAT.—Canada; Eastern and Northern States; Adirondack Mountains in July.

A. grisea Wlk.*

1856. Wlk., C. B. Mus., Het., IX, 56, *Acronycta.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 78, *Acronycta.*
1875. Grt., Can. Ent., VII, 222, *Apatela.*
1882. Grt., Ill. Essay, 39, *Apatela.*
1883. Grt., Papilio, III, 68, *Apatela.*
1883. Hy. Edw., Papilio, III, 131, larva.
pudorata Morr.
1875. Morr., Ann. Lyc. Nat. Hist., N. Y., XI, 93, *Acronycta.*
1875. Grt., Can. Ent., VII, 221, 222, pr. syn.
1880. Grt., Can. Ent., XII, 188, pr. syn.

HABITAT.—Canada to Southern and Central States; Minnesota in July.

The type of *pudorata* is in the Tepper collection.

A. tritona Hbn.*

1818. Hbn., Zutræge, 21, f. 107, 108, *Triæna.*
1816. Hbn., Verzeichniss, 201, *Triæna.*
1852. Gn., Spec. Gen., Noct., I, 42, *Acronycta.*
1856. Wlk., C. B. Mus., Het., IX, 53, *Acronycta.*
1875. Grt., Can. Ent., VII, 221, *Apatela.*
1880. Grt., Can. Ent., XII, 87, *Apatela.*
1883. Grt., Papilio, III, 68, *Apatela.*

HABITAT.—Canada to Florida; Minnesota; Mississippi; Colorado; Portland, Oregon, in May.

A. betulæ Riley.*

1884. Riley, Bull. Bkln. Ent. Soc., VII, 2, fig., *Acronycta*

HABITAT.—New Jersey; District of Columbia.

The types are in the National Museum.

A. innotata Gn.*

1852. Gn., Spec. Gen., Noct., I, 50, *Acronycta.*
1856. Wlk., C. B. Mus., Het., IX, 59, *Acronycta.*
1883. Grt., Papilio, III, 114, *Apatela.*
græfii Grt.
1863. Grt., Proc. Ent. Soc. Phil., II, 68, pl. iii, f. 6, *Diphthera.*
1875. Morr., Can. Ent., VII, 79, pr. syn.

HABITAT.—Canada; Northern and Eastern States; New York in August; Canada in July; Massachusetts in June.

A. falcula Grt.

1877. Grt., Can. Ent., IX, 86, *Apatela.*
1881. Coquillett, Papilio, I, 6, larva.
1883. Grt., Papilio, III, 68, *Apatela.*

HABITAT.—Illinois.

A. parallela Grt.

1877. Grt., Can. Ent., IX, 53, *Apatela*
1883. Grt., Papilio, III, 68, *Apatela.*

HABITAT.—Colorado; Texas.

A. albarufa Grt.*

1874. Grt., Proc. Bost. Soc. N. H., XVI, 239, *Apatela.*
1883. Grt., Papilio, III, 68, *Apatela.*
walkeri Andrews.
1877. Andrews, Can. Ent., IX, 98, *Acronycta.*
1879. Graef, Bull. Bkln. Ent. Soc., I, 93, pr. syn.

HABITAT.—Canada; Northern, Eastern, Middle, and Central States; Mississippi; New Mexico; Minnesota in June; Massachusetts in July.

A. paupercula Grt.*

1874. Grt., Proc. Ac. Nat. Sci. Phil., 1874, 197, *Apatela.*
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 4, *Apatela.*
1883. Grt., Papilio, III, 68, *Apatela.*

HABITAT.—Texas in March.

A. vinnula Grt.*

1864. Grt., Proc. Ent. Soc. Phil., II, 436, pl. IX, f. 2, *Microcœlia.*
1868. Grt., Trans. Am. Ent. Soc., II, 118, *Acronycta*
1883. Grt., Papilio, III, 68, *Apatela.*

HABITAT.—Canada to Texas: New York in May and August; New Jersey in June.

A. quadrata Grt.*

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 154, *Apatela.*
1883. Grt., Papilio, III, 114, *Apatela.*

HABITAT.—Kansas.

A. harveyana Grt.*

1875. Grt., Proc. Ac. Nat. Sci. Phil., 1875, 418, *Apatela*.
spinigera ‡ Wlk.
1856. Wlk., C. B. Mus., Het., IX, 55, *Acronycta*.
1882. Grt., Ill. Essay, 39, pr. syn.

HABITAT.—New York in June; New Hampshire; Northern and Eastern States.

A. radcliffei Harv.*

1875. Harv., Bull. Buff. Soc. Nat. Sci., II, 270, *Apatela*.
1878. Thaxter, Psyche, II, 121, larva.
1883. Grt., Papilio, III, 11, *Apatela*.

HABITAT.—Massachusetts in June; New Hampshire; New York; Adirondack mountains in August.

A spinigera Gn.*

1852. Gn., Spec. Gen., Noct., I, 45, *Acronycta*.
1856. Wlk., C. B. Mus., Het., IX, 55, *Acronycta*.
1878. Thaxter, Psyche, II, 121, *Apatela*.
1883. Grt., Bull. Geol. Surv., VI, 572, *Apatela*.
1885. Dimmock, A. K., Psyche, IV, 274, larva.

HABITAT.—"New York."

Mr. Grote never positively identified this species. Walker's *spinigera* is cited to *harveyana*, while Mr. Grote says most of the specimens of *spinigera* in American collections are *pallidicoma*. Whether the larvæ mentioned by Thaxter and Dimmock are of this species, or of *pallidicoma*, or of some other yet unnamed species, is thus left uncertain. May, June, and August are dates given for *spinigera*.

A. tota Grt.

1879. Grt., North Am. Ent., I, 12, *Apatela*.
1883. Grt., Papilio, III, 69, *Apatela*.

HABITAT.—Texas.

A. felina Grt.

1880. Grt., Bull. Geol. Surv., V, 208, *Apatela*.
1887. French, Can. Ent., XIX, 48, life history.
1889. French, Can. Ent., XXI, 36, *Apatela*.

HABITAT.—California; Colorado, Glenwood Springs in October. The types are in the Tepper and Edwards collections.

A. lepusculina Gn.*

1852. Gn., Spec. Gen., Noct., I, 46, *Acronycta*.
1856. Wlk., C. B. Mus., Het., IX, 55, *Acronycta*.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 130, *Apatela*.
1874. Grt., Can. Ent., VI, 154, *Apatela*.
1875. Hy. Edw., Proc. Cal. Ac. Sci., VII, 23, larva.
1888. Hy. Edw., Ento. Amer., III, 185, *Apatela*.

HABITAT.—New York (?) to California; Colorado; Hudson's Bay Territory; Riley Co., Kansas, in June.

Guenée gives no definite locality. Mr. Edwards considers the species confined to the Pacific coast.

A. populi Riley.*

1870. Riley, 2d Rept. Ins. Mo., 119, f. 87, 88, *Acronycta*.
1872. Grt., Trans. Am. Ent. Soc., iv, 28, = *lepusculina*.
1881. Riley, Index and Supplt. to Mo. Repts., 74, ? *lepusculina*.
1881. Grt., Papilio, i, 127 = *lepusculina*.
1888. Hy. Edw., Ent. Amer., iii, 185, an sp. dist.
var. **sancta** Hy. Edw.
1888. Hy. Edw., Ento. Amer., iii, 185, pr. var.

HABITAT.—Missouri; New Hampshire; New Brunswick in August; New York in July; Colorado.

Dr. Riley's types are in the National Museum. The type of *sancta* is in the Edwards collection. Probably most of the references to *lepusculina* in local lists should be to this species.

A. vulpina Grt.

1883. Grt., Can. Ent., xv, 8, *Apatela*.
1883. Grt., Papilio, iii, 68, *Apatela*.
1883. Thaxter, Papilio, iii, 15, larva.
1885. Dimmock, A. K., Psyche, iv, 274, larva.
1888. Grt., Can. Ent., xix, 20, *Apatela*.

HABITAT.—Maine; Massachusetts; New York.

A. americana Harr.*

1841. Harris, Rept. Ins. Mass., 317, *Acronycta*.
1862. Harris, Ins. Inj. Veg., Flint ed., 436, f. 216–218, *Acronycta*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., ii 154, *Apatela*.
1881. Coquillett, Papilio, i, 6, larva.
1883. Grt., Papilio, iii, 111, *Apatela*.
1885. Dimmock, A. K., Psyche, iv, 274, food plants.
aceris ‡ S & A.
1797. Sm. & Abb., Ins. Ga., ii, 185, pl. 93, larva.
var. **obscura** Hy. Edw.
1886. Hy. Edw., Ent. Amer., ii, 169, *Apatela*, pr. var.

HABITAT.—Canada to Georgia; west to Utah and Colorado; Canada in June and July; New York also in September.

The type of *obscura* is in the Edwards collection.

A. dactylina Grt.*

1874. Grt., Proc. Bost. Soc. N. H., xvi, 239, *Apatela*.
1875. Morr., Psyche, i, 42, *Apatela*.
1883. Grt., Papilio, iii, 111, *Apatela*.
1885. Dimmock, A. K., Psyche, iv, 274, larva.
1892. Edw., and Elliott, Bull. Am. Mus. Nat. Hist., iv, 77, larva.

HABITAT.—Canada to District of Columbia; west to Colorado; Minnesota; Massachusetts in June; Canada in July.

A. hastulifera S. & A.

1797. S. & A., Ins. Ga., II, 183, pl. 92, *Phalæna.*
1852. Gn., Spec. Gen., Noct., I, 47, *Acronycta.*
1856. Wlk., C. B. Mus., Het., IX, 56, *Acronycta.*
1874. Lintner, Ent. Cont., III, 158, larva.

HABITAT.—New York to Georgia; Central States; Canada in June.

A. insita Wlk.

1856. Wlk., C. B. Mus., Het., IX, 61, *Acronycta.*
1883. Grt., Papilio, III, 111, *Apatela.*

HABITAT.—Canada; Eastern and Middle States.

A. acericola Gn.

1852. Gn., Spec. Gen., Noct., I, 48, *Acronycta.*
1856. Wlk., C. B. Mus., Het., IX, 57, *Acronycta.*
aceris ‡ S. & A.
1797. S. & A., Ins., Ga., II, 184, pl. 93, *Phalæna.*
1852. Gn., Spec. Gen., Noct., I, 48, pr. syn.
hastulifera ‡ larva, S. & A.
1797. S. & A., Ins. Ga., II, 183, pl. 92, larva.
1852. Gn., Spec. Gen., Noct., I, 48, larva *acericola.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 154, *Acronyc*

HABITAT.—Georgia; Virginia.

It is questionable whether the above synonymy can be considered settled; but it is a matter to be determined by the monographer of the genus and not by the catalogue maker.

A. impressa Wlk.

1856. Wlk., C. B. Mus., Het., IX, 61, *Acronycta.*
1882. Grt., Ill. Essay, 38, = *brumosa.*
1887. Butler, Ent. Amer., III, 35, *Acronycta.*
fasciata Wlk.
1856. Wlk., C. B. Mus., Het., IX, 62, *Acronycta.*
1882. Grt., Ill. Essay, 39 = *brumosa.*
1887. Butler, Ent. Amer., III, 35, = *impressa.*
brumosa ‡ Grt., in lists.
1875. Speyer, Stett. Ent., Zeit., XXXVI, 109, *Acronycta.*
1881. Coquillett, Papilio, I, 56, larva.
1883. Saund., Fruit Insects, 313, f, 325, larva.
1885. Dimmock. A. K., Psyche, IV, 274, larva.
1887. Butler, Ent. Amer., III, 35, = *impressa.*
verrillii G. & R.
1870. G. & R., Trans. Am. Ent. Soc., III, 178, pl. ii, f. 82, *Acronycta.*
1875. Morr., Can. Ent., VII, 79 = *A. innotata.*
1875. Morr., Ann. Lyc. Nat. Hist. N. Y., XI, 92 = *brumosa.*
1875. Morr., Psyche, I, 42 = *brumosa.*

HABITAT.—Canada to Florida, to Wisconsin, to Mississippi; Central States; Canada, May to August; New York, July and August; Minnesota in June; Glenwood Springs, Colorado, in August.

The type of *verrillii* is in the collection of the American Entomological Society, and is the *brumosa* of the same collection, the latter labeled by Grote. The synonymy above given is after Butler.

A. distans Grt

1879. Grt., Can. Ent., XI, 38, *Apatela*.

HABITAT.—Canada.

A. rubricoma Gn.*

1852. Gn., Spec. Gen., Noct. I, 49, *Acronycta*.
1856. Wlk., C. B. Mus., Het., IX, 57, an sp. dist., *acericola?*

HABITAT.—Canada; Middle and Southern States.

A. luteicoma G. & R.*

1870. G. & R., Trans. Am. Ent. Soc., III, 179, pl. ii, f. 83, *Acronycta*.
1883. Thaxter, Papilio, III, 16, *Acronycta*.

HABITAT.—Canada; Northern and Middle States to Colorado; Minnesota in June; Massachusetts in June; Portland, Oregon, in May.

A. impleta Wlk.*

1856. Wlk., C. B. Mus., Het., IX, 57, *Acronycta*.
subochrea Grt.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 153, *Acronycta*.
1875. Grt., Can. Ent., VII, 227, pl. i, f. 10, *Apatela*.
1887. Butler, Ent. Amer., III, 36, pr. syn.

HABITAT.—Canada in July; Eastern, Middle and Central States; New York in May and June.

A. perdita Grt.*

1874. Grt., Can. Ent., VI, 154, *Acronycta*.

HABITAT.—California in June.

A. afflicta Grt.*

1864. Grt., Proc. Ent. Soc. Phil., II, 438, pl. ix, f. 4, *Acronycta*.
1870. Grt., Trans. Am. Ent. Soc., III, 179, *Acronycta*.
1883. Thaxter, Papilio, III, 17, larva.

HABITAT.—Middle, Southern and Central States; Massachusetts in June; Texas in March; Canada.

A. noctivaga Grt.*

1864. Grt., Proc. Ent. Soc. Phil., II, 437, pl. ix. f. 3, *Acronycta*.
1869. Bethune, Can. Ent., I, 71, *Acronycta*.
1883. Thaxter, Papilio, III, 15, life history.
longa ‡ Wlk.
1856. Wlk., C. B. Mus., Het., IX, 60. *Acronycta*.
1868. G. & R., Trans. Am. Ent. Soc., II, 77, pr. syn.
1887. Butler, Ent. Amer., III, 36, pr. syn.

HABITAT.—Canada to Southern and Central States; Colorado; New Mexico; Canada, June to August; Massachusetts and New York, May and June; Portland, Oregon, April and May.

Mr. Grote's type is in the collection of the American Entomological Society.

A. brumosa Gn.*

1852. Gn., Spec. Gen., Noct., I, 52, *Acronycta.*
1856. Wlk., C. B. Mus., Het., IX, 59, *Acronycta.*
longa Gn.
1852. Gn., Spec. Gen., Noct., I, 51, *Acronycta.*
1869. Bethune, Can. Ent., I, 71, *Acronycta.*
1887. Butler, Ent. Amer., III, 36, pr. syn.
persuasa Harv.
1875. Harv., Bull. Buff. Soc. Nat. Sci., II, 271, *Apatela.*
1887. Butler, Ent. Amer., III, 36, pr. syn.

HABITAT.—Southern States; Colorado; New Mexico; Texas in March.

Mr. Butler does not make the reference of *longa* to *brumosa* very positively and does so without a comparison of types.

A. superans Gn.*

1852. Gn., Spec. Gen., Noct., I, 53, *Acronycta.*
1856. Wlk., C. B. Mus., Het., IX, 56, *Acronycta.*
1869. Bethune, Can. Ent., I, 85, *Acronycta.*
1875. Morr., Psyche, I, 42, *Apatela.*
1881. Coquillett, Papilio, I, 6, larva.
1883. Saunders, Fruit Insects, 166, f. 174, 175, larva.

HABITAT.—Canada; Eastern, Middle, and Central States; Canada and New York, June and July.

A. connecta Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 79, *Acronycta.*

HABITAT.—Canada; Northern, Eastern, Middle, and Central States; Canada in August.

A. funeralis G. & R.

1866. G. & R., Proc. Ent. Soc. Phil., VI, 17, pl. iii, f. 8, *Acronycta.*
1870. G. & R., Trans. Am. Ent. Soc. III, 179, *Acronycta.*
1874. Lintner, Ent. Cont., III, 135, 157, larva sub nom., *americana.*
1875. Speyer, Stett. Ent. Zeit., XXXVI, 111, *Acronycta.*
1875. Grt., Check List, Noct., pl. f. 1, *Apatela.*
1883. Grt., Papilio, III, 111, *Jochearea.*
americana ‡ Harr.
1869. Harris, Ent. Corr., 313, pl. iii, f. 3, larva only.
1874. Lintner, Ent. Cont., III, 157, pr. syn.

HABITAT.—Maine to Iowa; Eastern, Middle, and Central States.

A. ovata Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 80, pl. ii, f. 14, *Acronycta.*
1883. Grt., Papilio, III, 112, *Lepitoreuma.*

HABITAT.—New York to Texas; Central States; Northern States in June; Texas in July.

The type is in the collection of the American Entomological Society.

A. modica Wlk.

1856. Wlk., C. B. Mus., Het., IX, 56, *Acronycta*.
1887. Butler, Ent. Amer., III, 36, *Acronycta*.
exilis Grt.
1874. Grt., Proc. Ac. Nat. Sci. Phil., 1874, 197, *Acronycta*
1883. Grt., Papilio, III, 112, *Lepitoreuma*.
1887. Butler, Ent. Amer., III, 36, pr. syn.

HABITAT.—Massachusetts to Minnesota to Texas: Northern States in June.

A. increta Morr.

1874. Morr., Proc. Bost. Soc. N. H., XVII, 131, *Acronycta*.
1883. Grt., Papilio, III, 112, *Lepitoreuma*.

HABITAT.—Middle States, New Mexico.

The type is in the Tepper collection.

A. hamamelis Gn.

1852. Gn., Spec. Gen., Noct., I, 52, *Acronycta*.
1856. Wlk., C. B. Mus., Het., IX, 59, *Acronycta*.
1877. Good., Can. Ent., IX, 61, larva.
1883. Grt., Papilio, III, 112, *Lepitoreuma*.
1887. Butler, Ent. Amer., III, 36, *Acronycta*.
clarescens Gn., nec Grt.
1852. Gn., Spec. Gen., Noct., I, 54, *Acronycta*.
1856. Wlk., C. B. Mus., Het., IX, 60, *Acronycta*.
1887. Butler, Ent. Amer., III, 36, pr. syn.

HABITAT.—Canada to Texas; Central States. Northern States, June and July; Texas, March, April, and July.

A. hæsitata Grt.

1882. Grt., Bull. Geol. Surv., VI, 575, *Apatela*.
1883. Grt., Papilio, III, 112, *Lepitoreuma*.

HABITAT.—Canada; New York to Texas; Central States.

A. pruni Harr.

1869. Harris, Ent. Corr., by Scudder, 313, pl. iv, f. 13, larva.
clarescens ‡ Grt., in lists et coll.
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 4, *Apatela*.
1887. Butler, Ent. Amer., III, 36, not *clarescens* Gn.

HABITAT.—Nova Scotia to Southern and Central States.

The Harris specimens are in the collection of the Boston society, numbered 32. They are undoubtedly what Mr. Grote has named *clarescens* in American collections, but which Mr. Butler shows is not Guenée's species. As Mr. Grote's determination is incorrect, the species is nameless and Dr. Harris's name becomes available.

A. retardata Wlk.*

1861. Wlk., Can. Nat. and Geol., VI, 38,? *Microcœlia.*
1877. Grt., Can. Ent., IX, 26=*dissecta.*
dissecta G. & R.
1870. G. & R., Trans. Am. Ent. Soc., III, 178, pl. ii, f. 81, *Acronycta.*
1883. Grt., Papilio, III, 113, *Lepitoreuma.*

HABITAT.—Canada, Northern, Eastern, Middle, and Central States. Canada and Northern States, June and July.

The type of *dissecta* is in the collection of the American Entomological Society. Mr. Grote himself stated the identity of *dissecta* with *retardata*, yet nevertheless continued to use the former term. The type of *retardata* is in the collection of the Entomological Society of Ontario.

A. sperata Grt.

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 81, pl. ii, f. 1, *Acronycta.*
1883. Grt., Papilio, III, 113, *Arctomyscis.*

HABITAT.—Eastern, Middle, and Central States, to Colorado; Northern States, May to August; Canada.

The type is in the collection of the American Entomological Society.

A. edolata Grt.*

1881. Grt., Papilio, I, 153, *Apatela.*
1882. Grt., Ill. Essay, 49, pl. i, f. 4, *Mastiphanes.*

HABITAT.—Arizona; Colorado.

A. extricata Grt.

1882. Grt., Bull. Geol. Surv., VI, 575, *Apatela.*
1883. Grt., Papilio, III, 113, *Mastiphanes.*

HABITAT.—Texas.

A. pallidicoma Grt.*

1878. Grt., Bull. Geol. Surv., IV, 169, *Apatela.*

HABITAT.—Eastern, Middle, and Central States to Kansas; Canada in May, June, and August.

A. xyliniformis Gn.*

1852. Gn., Spec. Gen., Noct., I, 56, *Acronycta xylinoides.*
1852. Gn., Spec. Gen., Noct., III, 400, *xyliniformis.*
1856. Wlk., C. B. Mus., Het., IX, 60, *Acronycta.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 81, note 11, *xylinoides.*
1873. Riley, 5th Rept. Ins. Mo., 126, *xylinoides*, larva.
1885. Dimmock, A. K., Psyche, IV, 274, *Apatela.*

HABITAT.—New York to Florida; Texas in July and August.

A. lithospila Grt.*

1874. Grt., Proc. Bost. Soc. N. H., XVI, 240, *Acronycta.*
1883. Hy. Edw., Papilio, III, 132, larva.

HABITAT.—Northern, Middle, and Central States; Massachusetts in June.

A. oblinita S. & A.

1797. S. & A., Ins. Ga., II, 187, pl. 94, *Phalæna.*
1852. Gn., Spec. Gen., Noct., I, 49, *Acronycta.*
1856. Wlk., C. B. Mus., Het., IX, 58, *Acronycta.*
1871. Saund., Can. Ent., III, 226, figd.
1871. Riley, Amer. Ent., II, 341, f. 210, larva.
1871. Riley, 3d Rept., Ins. Mo., 70, f. 29, 30, all stages.
1874. Lintner, Ent. Cont., III, 159, larva.
1875. Gentry, Proc. Ac. Nat. Sci. Phil., 1875, 24, larva.
1878. Goodell, Can. Ent., X, 66, larva.
1882. Grt., Papilio, II, 99, larva.
1883. Grt., Papilio, III, 113, *Eulonche.*
1883. Saund., Fruit Ins., 325, f. 337, all stages.

HABITAT.—Nova Scotia to Florida; Central States, May to August; Northern States, May to August; Riley Co., Kansas, in May.

This species has quite a large economic bibliography, which is partly given in Mr. Edwards's catalogue of early stages.

A. lanceolaria Grt.*

1875. Grt., Proc. Ac. Nat. Sci. Phil., 1875, 418, *Apatela.*
1882. Grt., Ill. Essay, 50, pl. i, f. 7, *Eulonche.*
1883. Grt., Papilio, III, 113, *Eulonche.*

HABITAT.—Massachusetts in August.

The type is in the British Museum.

A. insolita Grt.

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 82, *Acronycta.*
1883. Grt., Papilio, III, 113, *Eulonche.*

HABITAT.—Middle States.

The type is in the British Museum.

A. interrupta Gn.

1852. Gn., Spec. Gen., Noct., I, 46, *Acronycta.*
1856. Wlk., C. B. Mus., Het., IX, 55, *Acronycta.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 78, note 4, *Acronycta.*

HABITAT.—"Georgia; Am. Sept."

This has not been identified in American collections; it was described from a figure by Abbot, and Guenée expresses himself as uncertain whether it really belongs to this genus.

A. declarata Wlk.

1856. Wlk., C. B. Mus., Het., IX, 61, *Acronycta.*

HABITAT.—Canada.

Described as a black species with white markings, and probably not an *Acronycta* at all. I did not see it in the British Museum.

[Since the above note went to the printer, Mr. Schaus has sent me a very good figure made from the type, which is at Oxford, which proves the species to be *Mamestra adjuncta* Bdv., the latter name taking precedence.]

A. simplex Wlk.

1865. Wlk., C. B. Mus., Het., XXXII, 618, *Acronycta.*

HABITAT.—Vancouver.

To Mr. Butler's kindness I owe a rough sketch of this species which shows a form totally unlike any known to me, and looks rather like a pale Hadenid than an *Acronycta.* [It is *Xylomiges crucialis.*]

A. salicis Harr.

1869. Harr., Ent. Cont., 314, f. 44, larva only.

HABITAT.—Massachusetts.

Described from the larva only. I have no note of seeing any specimens under this name in the Harris collection.

Genus **HARRISIMEMNA** Grt.
1873. Grt., Trans. Am. Ent. Soc., IV, 293.

H. trisignata Wlk.*

1856. Wlk., C. B. Mus., Het., IX, 29, *Grammophora.*
1873. Grt., Trans. Am. Ent. Soc., IV, 293, *Harrisimemna.*
1882. Grt., Ill. Essay, 49, pl. i, f. 3, *Harrisimemna.*
1886. Goodhue, Can. Ent., XVIII, 58, larva on lilac.
sexguttata Harr.
1869. Harr., Ent. Corr., 174, f. 24, 25, *Notodonta.*
1873. Grt., Trans. Am. Ent. Soc., IV, 293, pr. syn.

HABITAT.—Canada in July; New York; Pennsylvania; Massachusetts in June; Texas.

Walker's type is in the British Museum.

Genus **CERMA** Hbn.
1816. Hbn., Verzeichniss, 207.

C. cora Hbn.*

1818. Hbn., Zutræge, I, 14, ff. 59, 60, *Cerma.*
1816. Hbn., Verzeichniss, 207, *Cerma.*
1852. Gn., Spec. Gen., Noct., I, 31, *Grammophora.*
1856. Wlk., C. B. Mus., Het., IX, 29, *Grammophora.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 14, *Lamprosticta.*
1880. Grt., Can. Ent., XII, 86, *Cerma.*
1882. Smith, Bull. Bkln. Ent. Soc., V, 38, *Bryophila.*
festa Gn.
1852. Gn., Spec. Gen., Noct., II, 57, pl. 7, f. 5, *Chariptera.*
1857. Wlk., C. B. Mus., Het., XI, 535, *Lamprosticta.*
1880. Grt., Can. Ent., XII, 86, pr. syn.
1881. Grt., Bull. Geol. Surv., VI, 570, pr. syn.?

HABITAT.—Canada; Maine to Georgia.

The species was described from the Guerin collection by Guenée, and I have not seen the type.

C. olivacea Smith.*

1891. Smith, Trans. Am. Ent. Soc., XVIII, 103, *Cerma.*

HABITAT.—Colorado, Glenwood Springs, September and October; Sierra Nevada, California.

Types are in the National Museum and in the Edwards collection.

Genus **POLYGRAMMATE** Hbn.
1816. Hbn., Verzeichniss, 203.

P. hebraicum Hbn.*

1818. Hbn., Zutræge, I, 10, ff. 25, 26, *Polygrammate.*
1816. Hbn., Verzeichniss, 203, *Polygrammate.*
1880. Grt., Can. Ent., XII, 85, *Polygrammate.*
1882. Smith, Bull. Bkln. Ent. Soc., V, 30, *Bryophila.*
hebrœa Gn.
1852. Gn., Spec. Gen., Noct., I, 31, pl. 3, f. 5, *Grammophora.*
1856. Wlk., C. B. Mus., Het., IX, 29, pr. syn.

HABITAT.—Massachusetts, in July; New York; District of Columbia in August; Florida; Texas.

Genus **MICROCŒLIA** Gn.
1852. Gn., Spec. Gen., Noct., I, 33.

M. fragilis Gn.*

1852. Gn., Spec. Gen., Noct., I, 34, *Microcœlia.*
1856. Wlk., C. B. Mus., Het., IX, 31, *Microcœlia.*
1864. Grt., Proc. Ent. Soc. Phil., III, 80, *Microcœlia.*
1875. Morr., Psyche, I, 42, *Microcœlia.*
spectans Wlk.
1861. Wlk., Can. Nat. and Geol., VI. 38, ? *Bryophila.*
1877. Grt., Can. Ent., IX, 27, pr. syn.

HABITAT.—Canada in June and July; Northern, Middle, and Central States; Northern States in July and August.

Guenée's type is in the British Museum; Walker's species is in the collection of the Entomological Society of Ontario, and was compared by Mr. Grote.

M. diphteroides Gn.*

1852. Gn., Spec. Gen., Noct., I. 34, pl. 3, f. 7, *Microcœlia.*
1856. Wlk., C. B. Mus., Het., IX, 31, *Microcœlia.*
1864. Grt., Proc. Ent. Soc. Phil., III, 78, pl. 2, f. 2, *Microcœlia.*
1868. G. & R., Trans. Am. Ent. Soc., II, 195, pl. 3, f. 69, *Microcœlia.*
var. *obliterata* Grt.*
1864. Grt., Proc. Ent. Soc. Phil., III, 79, *Microcœlia.*
1868. G. & R., Trans. Am. Ent. Soc., II, 195, pl. 3, f. 70, *Microcœlia.*

HABITAT.—Canada, in June, to Virginia, west to Wisconsin, Missouri, Iowa; Kansas; New York; Massachusetts in June and July; Riley Co., Kansas, in April.

Guenée's type is in the British Museum, where there is also a specimen of Mr. Grote's species, without a "type" label.

Genus **BRYOPHILA** Tr.

1825. Tr., Schmett. Eur., v, 57.

B. lepidula Grt.*

1874. Grt., 6th Rept. Peab. Ac. Sci., 23, *Jaspidea.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, pl. i, f. 3, *Jaspidea.*
1875. Grt., Stett. Ent. Zeit., XXXVI, 196, *Jaspidea.*
1881. Grt., Bull. Geol. Surv., VI, 570, *Bryophila.*

HABITAT.—Canada in July and August; Maine to New Jersey; Pennsylvania; Minnesota; Missouri; Colorado; New York, June, July, and August; Delaware in July.

The type is in the British Museum.

B. corticosa Gn.

1852. Gn., Spec. Gen., Noct., I, 30, *Bryophila.*
1856. Wlk., C. B. Mus., Het., IX, 27, *Bryophila.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 8, *Jaspidea.*
1881. Grt., Bull. Geol. Surv., VI, 570, *Bryophila.*

HABITAT.—"Am. Sept."

The type is with M. Oberthür, and the species is as yet unidentified in our collections.

B. viridata Harv.

1876. Harv., Can. Ent., VIII, 35, *Jaspidea.*
1882. Grt., New List, 23, *Bryophila.*

HABITAT.—California.

The type is in the Edwards collection.

B. teratophora H. Sch.*

1853. H. Sch., Exot. Schmett., 80, f. 213, *Bryophila.*
1856. Wlk., C. B. Mus., Het., IX, 27, *Bryophila.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 8, *Jaspidea.*
inscripta Wlk.
1857. Wlk., C. B. Mus., Het., XII, 808, *Erastria.*
1868. G. and R., Trans. Am. Ent. Soc., II, 78, pr. syn.

HABITAT.—Canada to Texas; Illinois; Iowa, June to August.

Walker's type is in the British Museum, and certainly agrees well with what we have as *teratophora*. The type of the latter I have not seen.

B. nana Hbn.

1818. Hbn., Zutræge, I, 14, ff. 53, 54, *Cryphia.*
1816. Hbn., Verzeichniss, 205, *Cryphia.*
1852. Wlk., C. B. Mus., Het., IX, 26, *Bryophila.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 8, *Jaspidea.*

HABITAT.—"Georgia in Florida."

This species has not been identified in our collections. It does not look like a *Bryophila* and may not be North American at all. Yet on the other hand the species may turn up again when the Southern States are well collected over.

Genus **CYATHISSA** Grt.

1881. Grt., Bull. Geol. Surv., VI, 576.

C. percara Morr. *

1874. Morr., Proc. Bost. Soc. N. H., XVII, 213, *Bryophila.*
1875. Grt., Proc. Bost. Soc. N. H., XVIII, 414 *Bryophila.*
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 308, *Jaspidea.*
1881. Grt., Bull. Geol. Surv., VI, 576, *Cyathissa.*

HABITAT.—Florida; Texas, March to May and September; Colorado.

The type is probably at Cambridge; but I have no memorandum of having seen it there.

Genus **CHYTONIX** Grt.

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 66.

C. palliatricula Gn.*

1852. Gn., Spec. Gen., Noct., I, 26, *Bryophila.*
1856. Wlk., C. B. Mus., Het., IX, 26, *Bryophila.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 66, *Chytonix.*
1877. Grt., Can. Ent., IX, 196, *Chytonix.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 155, *Bryophila.*
iaspis Gn.
1852. Gn., Spec. Gen., Noct., I, 209, *Apamea.*
1856. Wlk., C. B. Mus., Het., IX, 250, *Apamea.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 66, *Chytonix.*
1881. Grt., Papilio, I, 49, ? pr. syn.
1882. Grt., New List, 23, pr. syn.

HABITAT.—Canada, May and June, to Virginia; Illinois; Minnesota; New York and Massachusetts in July; North Carolina in August.

Guenée's types are in the British Museum. In *palliatricula* the median space is largely white, else I see no difference. This is a variable feature in the species and is not sexual.

C. sensilis Grt.*

1881. Grt., Papilio, I, 49, *Chytonix.*
1882. Grt., Ill. Essay, 51, pl. I, f. 6, *Chytonix.*

HABITAT.—Massachusetts; New York; New Jersey.

The type is in the British Museum. The white spot in the median streak is a variable character. I have a compared specimen exactly like the type except in that respect. A typical specimen is in Dr. Thaxter's collection.

AGROTIS Auct.

The species classed under the above generic term have been monographically treated by me in *Bulletin No. 38 of the United States National Museum,* Washington, 1890, and in accordance with this revision, the collections in the Museum are arranged. I have carefully compared all the types in the European Museums with the characteristics given for them, and have noted the discrepancies where such existed. It would be waste of space to cite this monograph for every species, and to the end of *Carneades*, the reference is understood even where not made. It is to be noted that I claim generic value for all the divisions proposed by me, and the title *Agrotis* Auct., is simply a convenient heading for this note.

Genus **RHYNCHAGROTIS** Smith.

1890. Smith, Bull. U. S. Nat. Mus., No. 38, 13.

R. gilvipennis Grt.*

1874. Grt., 6th Rept. Peab. Ac. Sci., App., 24, *Agrotis*.
1874. Grt., Can. Ent., VI, 71, *Agrotis*.
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 301, *Agrotis*.
1875. Morr., Proc. Bost. Soc. N. H., XVIII, 117 = *chardinyi*.
1876. Grt., Stett. Ent. Zeit., XXXVII, 135 = *chardinyi*.
chardinyi ‡ Morr.
1875. Morr., Proc. Bost. Soc. N. H., XVIII, 117, *Agrotis*.
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 14, *Rhynchagrotis*.

HABITAT.—Anticosti; Labrador; Canada; Maine; Vermont in July; Adirondack Mountains, New York, July and August.

I have compared the type of *gilvipennis* in the British Museum with a good series of the Siberian *chardinyi*, and find the two species distinct. The points of difference are numerous, and I have restored Mr. Grote's name. The reference to the synonymy was made by Mr. Morrison, accepted by Mr. Grote, and, without opportunity of comparing the Asiatic form, I followed these authors in my monograph. I have collected a considerable number of specimens of our American form and have examined many others without seeing any that agreed with Boisduval's species. A specimen marked "*gilvipennis* type" by Mr. Morrison, is in the National Museum.

R. rufipectus Morr.*

1874. Morr., Proc. Bost. Soc. N. H., XVII, 165, *Agrotis*.
1876. Grt., Ann. Lyc. Nat. Hist., N. Y., XI, 304, *Agrotis*.

HABITAT.—Northern and Eastern States; New York in August, Lewis County in July; Colorado; Oregon; British Columbia; Los Angeles County, California, in October.

I have seen no types. Mr. Morrison states that he received the specimen from Mr. Grote, and the Grote collection contains specimens agreeing with my identification of the species in the U. S. National Museum.

R. brunneicollis Grt.*

1864. Grt., Proc. Ent. Soc. Phil., III, 524, Pl. 5, f. 5, *Noctua*.
1869. Grt., Trans. Am. Ent. Soc., II, 309, *Agrotis*.

HABITAT.—Canada, Northern, Eastern, and Middle States; west to Iowa, Nebraska, and Colorado; Albany, N. Y., June; Massachusetts in August; Canada, July to September; Vermont in September.

The type is in the collection of the American Entomological Society at Philadelphia, and specimens are in the British Museum, both agreeing with the specimens in the U. S. National Museum.

R. minimalis Grt.*

1879. Grt., No. Am. Ent., I, 45, *Agrotis.*

HABITAT.—Maine, Colorado.

The type is in the British Museum and is like the species so named in the U. S. National Museum.

R. anchocelioides Gn.*

1852. Gn., Sp. Gen., Noct., I, 384, *Cerastis.*
1857. Wlk., C. B. Mus., Het., X, 452, *Cerastis.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 26, *Glæa.*
cupida Grt.
1864. Grt., Proc. Ent. Soc. Phil., III, 525, pl. 5, f. 7, *Noctua.*
1869. Grt., Trans. Am. Ent. Soc., II, 309, *Agrotis.*
1874. Grt., Can. Ent., VI, 16, *Cerastis.*
1878. Grt., Can. Ent., X, 234, *Agrotis.*
1878. Lintn., Ent. Cont., IV, 124, *Agrotis.*
1889. Butler, Trans. Ent. Soc. Lond., 1889, 383, *Amathes.*
velata Wlk.
1865. Wlk., C. B. Mus., Het., XXXII, 710, *Graphiphora.*
1889. Butler, Trans. Ent. Soc. Lond., 1889, 383 = *cupida.*
var. **brunneipennis** Grt.
1875. Grt., Can. Ent., VII, 187, *Agrotis.*
1878. Grt., Can. Ent., X, 234, an var. pr.?
1883. Grt., Proc. Am. Phil. Soc., XXI, 155, *Agrotis.*

HABITAT.—Canada, Northern, Eastern, Middle, and Central States; Iowa; Nebraska; Colorado; New Mexico; Canada in July and August; Massachusetts in August; Illinois, New York, and District of Columbia in September.

Mr. Grote has utterly mistaken Guenée's species. One of the types or specimens from which the description was made is in the British Museum. It is a poor, somewhat rubbed specimen, but it is unquestionably Mr. Grote's *cupida.* The original type of *cupida* is in the collection of the American Entomological Society at Philadelphia and a duplicate "type" is in the British Museum. The type of *Graphiphora velata* Walker is also referable to the same species, as Mr. Butler has stated. The type of *brunneipennis* is with Mr. Thaxter and I have seen it in his collection.

R. placida Grt.*

1876. Grt., Ann. Lyc. Nat. Hist., N. Y., XI, 305, *Agrotis.*
1878. Grt., Can. Ent., X, 235, *Agrotis.*
1889. Butler, Trans. Ent. Soc. Lond., 1889, 383 = *cupida.*

HABITAT.—Maine; New York, Lewis County, in July; Nevada; Colorado, Glenwood Springs in August and September; Utah; Arizona; New Mexico; Canada.

The type in the British Museum is like the species known to me under this name, and is not the same as *cupida*.

R. variata Grt.*

1876. Grt., Bull. Buff. Soc. Nat. Sci., III, 83, Pl. 4, f. 12, *Agrotis*
1883. Grt., Proc. Am. Phil. Soc., XXI, 155, *Agrotis*.
1889. Butler, Trans. Ent. Soc. Lond., 382 = *phyllophora*.
varix Grt.
1876. Grt., Bull. Buff. Soc. Nat. Sci., III, 83, an var. pr.?
1889. Butler, Trans. Ent. Soc. Lond., 382 = *phyllophora*.
orbis Grt.
1876. Grt., Bull. Buff. Soc. Nat. Sci., III, 83, *Agrotis*.
1878. Grt., Bull. Geol. Surv., IV, 174, *Agrotis*.
1883. Grt., Proc. Am. Phil. Soc., XXI, 155 = ?*cupidissima*.
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 24 = *cupidissima*.

HABITAT.—Colorado; New Mexico; Nevada; Arizona; California; Vancouver; Glenwood Springs, Colorado, in September and October.

Types of each of these names are in the British Museum. Mr. Grote's remarks on his *orbis* thoroughly misled me, and I referred the name to *cupidissima*. As a matter of fact, the type of *orbis* is simply *variata* without the bluish scales, and one of the specimens labeled by Mr. Grote is typical *variata*. The specimens of *variata* in the collections U. S. National Museum are like the type.

R. alternata Grt.*

1864. Grt., Proc. Ent. Soc. Phil., III, 526, Pl. 5, f. 8, *Noctua*.
1869. Grt., Trans. Am. Ent. Soc., II, 309, *Agrotis*.
1874. Grt., Can. Ent., VI, 15, *Cerastis*.
1874. Grt., Can. Ent., VI, 214, *Agrotis*.
1878. Grt., Can. Ent., X, 235, *Agrotis*.
1883. Grt., Proc. Am. Phil. Soc., XXI, 155, *Agrotis*.
1889. Butler, Trans. Ent. Soc. Lond., 382 = *phyllophora*.

HABITAT.—Canada, July to September; Middle and Northern Atlantic States, west to the Mississippi; Colorado; District of Columbia in June; New York in July and August; Illinois in September.

The type is in the collection of the American Entomological Society, and the species is well and correctly known to collectors generally.

R. belfragei Smith.*

1890. Smith, Bull. U. S. Nat. Mus., No. 38, 20, *Rhynchagrotis*.

HABITAT.—Texas, March to June.

The type is in collections U. S. National Museum.

R. trigona Smith* n. sp.

cupidissima ‡ Smith.
1890. Smith. Bull. U. S. Nat. Mus., No. 38, 24, *Rhynchagrotis*.

HABITAT.—California; Oregon; Colorado; Arizona; Kansas; British Columbia; Glenwood Springs, Colorado, in August.

Mr. Grote had named *cupidissima* in Mr. Neumoegen's collection, a series of specimens which I assumed were correctly determined. Interpreting Mr. Grote's descriptions by these specimens, I made *orbis* and *lætula* synonyms of *cupidissima* in the monograph. The true *cupidissima* is very different from this species, and neither *orbis* nor *lætula* agree at all with it. A new name for what I have erroneously characterized as Mr. Grote's species is therefore necessary, and I propose *trigona*, as above. The types of this species are the specimens named *cupidissima* by me in the collections U. S. National Museum.

R. bimarginalis Grt.

1883. Grt., Ann. & Mag., N. H., 1883, 53, *Agrotis*.
1883. Grt., Trans. Kans. Ac. Sci., VIII, 54 (*Reprint*).

HABITAT.—New Mexico.

I have seen one of the specimens marked "type" by Mr. Grote, in the Neumoegen collection, and Prof. Snow also has a specimen in his collection.

R. vittifrons Grt.

1864. Grt., Proc. Ent. Soc. Phil., III, 527, pl. 5, f. 8, *Noctua*.
1868. Grt., Trans. Am. Ent. Soc., II, 309, *Agrotis*.

HABITAT.—Colorado, Glenwood Springs in September.

The type is in the collection of the American Entomological Society. The specimen in the British Museum, labeled *vittifrons*, in Mr. Grote's handwriting, is incorrectly determined, and is *formalis*.

R. inelegans Smith.

1890. Smith, Trans. Am. Ent. Soc., XVII, 43, *Agrotis*.

HABITAT.—Sierra Nevada, California.

The type is in the collection of the late Mr. Henry Edwards.

R. mirabilis Grt.

1879. Grt., No. Am. Ent., I, 39, *Agrotis*.

HABITAT.—Colorado; Arizona; New Mexico.

The type in the British Museum agrees with the specimens I have seen in American collections.

R. carissima Harv.

1875. Harv., in Grote, Check List, 25, *Agrotis*.

HABITAT.—California.

The male type is in the British Museum, and had been heretofore unknown to me. It is broad-winged, somewhat like *Orthodes*, and quite unlike any other of the species of this genus. It has no very close allies, and is placed in the series here because the orbicular, so far as it is traceable, is complete.

R. exsertistigma Morr.

1874. Morr., Proc. Bost. Soc. N. H., xvii, 166, *Agrotis*.
1875. Grt., Can. Ent., vii, 26 = *alternata*.
1875. Grt., Can. Ent., vii, 101, ? an sp. dist. *alternata*.
1875. Grt., Bull. Buff. Soc. Nat. Sci., ii, 303, an sp. dist.
1876. Grt., Bull. Buff. Soc. Nat. Sci., iii, 79, *Agrotis*.
1887. Smith, Proc. U. S. Nat. Mus., x, 450, *Agrotis*.
observabilis Grt.
1875. Grt., Can. Ent., vii, 144, *Agrotis*.
1878. Grt., Bull. Geol. Surv., iv, 174, *Agrotis*.
1887. Smith, Proc. U. S. Nat. Mus., x, 451, ? pr. syn.

HABITAT.—California.

The type of Mr. Morrison's species is now in the Graef collection. Mr. Grote's type in the British Museum is, as I suspected, the same thing, the *observabilis* of the Neumœgen collection being correctly determined. The specimens labeled *exsertistigma* by Mr. Grote, now in the British Museum, are reddish examples of *formalis*.

R. formalis Grt.*

1874. Grt., Bull. Buff. Soc. Nat. Sci., ii, 61, *Agrotis*.
1878. Grt., Bull. Geol. Surv., iv, 174, *Agrotis*.
1887. Smith, Proc. U. S. Nat. Mus., x, 450, *Agrotis*.
var *facula* Grt.*
1876. Grt., Bull. Buff. Soc. Nat. Sci., iii, 82, *Agrotis*.
1878. Grt., Bull. Geol. Surv., iv, 174, *Agrotis*.
1887. Smith, Proc. U. S. Nat. Mus., x, 451, *Agrotis*.
insularis Grt.
1876. Grt., Bull. Buff. Soc. Nat. Sci., iii, 82, *Agrotis*.
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 31 = *formalis* var.
emarginata Grt.
1876. Grt., Bull. Buff. Soc. Nat. Sci., iii, 82, *Agrotis*.
1878. Grt., Bull. Geol. Surv., iv, 174, *Agrotis*.
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 33, ? = *formalis* var.

HABITAT.—California, February, April to June, October, November; Vancouver; Portland, Oregon, in May and June; British Columbia.

Types of each of the above species are in the British Museum. A large series of bred specimens in the collections of the National Museum proves that the black-tipped collar is not a specific character in this species, and that the black filling in the cell around the ordinary spots is a variable quantity. The species named *facula* and *formalis* by me agree with the types. *Insularis* is a somewhat more evenly red brown form of *facula*, while *emarginata* is also the same species, but quite uniform in color, the ordinary spots faintly outlined by yellow scales.

R. costata Grt.*

1876. Grt., Bull. Buff. Soc. Nat. Sci., iii, 80, *Agrotis*.
exsertistigma ‡ Grt.
1875. Grt., Can. Ent., vii, 26, *Agrotis*.
1887. Smith, Proc. U. S. Nat. Mus., x, 451, err. typ.
binominalis Smith.
1887. Smith, Proc. U. S. Nat. Mus., x, 451, *Agrotis*.

HABITAT.—California; Washington; Vancouver.

The type of *costata* in the British Museum is a very poor specimen, without a head. The wings are, however, sufficiently characteristic to make it certain that it is the species I have called *binominalis*, specimens of which are in the U. S. National Museum, the type in the Tepper collection.

R. laetula Grt. *

1876. Grt., Bull. Buff. Soc. Nat. Sci., III, 83, *Agrotis.*
1878. Grt., Can. Ent., X, 234=*cupidissima.*
1878. Grt., Bull. Geol. Surv., IV, 173, ? an sp. dist. *cupidissima.*
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 24 =*cupidissima.*
distracta Smith.
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 36, *Rhynchagrotis.*
observabilis ‡ Smith.
1887. Smith, Proc. U. S. Nat. Mus., X, 454, *Agrotis.*

HABITAT.—Washington; Oregon; California.

The type of *lætula* is in the British Museum and is the same as the form named *distracta* by me.

R. discoidalis Grt.

1876. Grt., Bull. Buff. Soc. Nat. Sci., III, 82, pl. 4, f. 9, *Agrotis.*

HABITAT.—Nevada; Portland, Oregon, in June.

This species has been correctly placed by me, as appears by the type, in the British Museum.

R. cupidissima Grt.*

1875. Grt., Can. Ent., VII, 101, *Agrotis.*
1878. Grt., Can. Ent., X, 234, *Agrotis.*
1878. Grt., Bull. Geol. Surv., IV, 173, *Agrotis.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 155, *Agrotis.*

HABITAT.—California, July and September.

The type in the British Museum is nothing like the specimens so named by Mr. Grote in Mr. Neumoegen's collection, and which I accepted as correct. The real species I had not seen before. In size it is like *alternata* and there is a distinct blackish costal patch in the s. t. space preceding s. t. line. In the character of the ordinary spots it is nearest to *discoidalis.* I find four specimens of the species in the National Museum, which have been more recently added to the collection.

R. crenulata Smith.*

1887. Smith, Proc. U. S. Nat. Mus., X, 451, *Agrotis.*

HABITAT.—California, June and July; Utah in June; Portland, Oregon, in May.

Types of this species are in the U. S. National Museum, and in Mr. Neumoegen's collection.

R. confusa Smith.

1887. Smith, Proc. U. S. Nat. Mus., x, 452, *Agrotis.*
exsertistigma ‡ Grt.
1876. Grt., Bull. Buff. Soc. Nat. Sci., III, 79, pl. 4, f. 8, *Agrotis.*
1887. Smith, Proc. U. S. Nat. Mus., x, 452, pr. syn.

HABITAT.—Washington.

Types of this species are in the Tepper collection.

Genus **ADELPHAGROTIS** Smith.

1890. Smith, Bull. U. S. Nat. Mus., No. 38, 38.

A. stellaris Grt.

1880. Grt., Can. Ent., XII, 153, *Agrotis.*

HABITAT.—Nevada; Washington.

Types of this species are in the British Museum and also in Mr. Neumoegen's collection. Mr. Grote usually marked "Type" all the specimens before him when describing a species, and these quite frequently belonged to more than one collection. It thus happens that the "type" may be in several collections as already indicated.

A. indeterminata Wlk.

1865. Wlk., C. B. Mus., Het., XXXIII, 750, *Xylina.*
innotabilis Grt.
1874. Grt., Proc. Ac. Nat. Sci. Phil., XXVI, 202, *Agrotis.*
1880. Grt., Can. Ent., XII, 154, *Agrotis.*
washingtoniensis Grt.
1881. Grt., Bull. U. S. Geol. Surv., VI, 259, *Agrotis.*
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 40, =*innotabilis.*

HABITAT.—California; Washington; Vancouver.

Types of all these names are in the British Museum, and all are referable to the same species. Mr. Grote can not be blamed for not recognizing Walker's species in its generic disguise; but his name must be restored, nevertheless. The type resembles *innotabilis* rather than *washingtoniensis.*

A. quarta Grt.

1883. Grt., Bull. Geol. Surv., VI, 258, *Agrotis.*

HABITAT.—Sauzalito, California.

The type in the British Museum represents a species I had not before seen. It has nothing in common with *baja* except its ground color and has the structural characters of the present genus, differing obviously from all the species.

A. prasina Fabr.*

1787. Fabr., Mant. Ins., II, 169, *Noctua.*
1852. Gn., Sp. Gen., Noct., II, 75, *Aplecta.*
1857. Wlk., C. B. Mus., Lep. Het., XI, 550, *Eurois.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 163, *Eurois.*
1875. Speyer, Stett. Ent. Zeit., XXXVI, 136, *Aplecta.*
1875. Grt., Check List, Noct., *Agrotis.*
herbacea Gn.
1857. Gn., Sp. Gen., Noct., II, 73, *Polyphænis.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 12, *Eurois.*

HABITAT.—Canada to Middle States, west to the Mississippi Valley; Iowa; Colorado; Glenwood Springs in August; Europe; Northern States, June to September.

The European synonymy and bibliography are not given. In the British Museum is a specimen marked *Polyphænis herbacea* in what appears to be Guenée's handwriting, and this agrees very well with his description. It is not the type. Guenée appears to have known *prasina* from North America, but a large bright-green specimen such as is sometimes met with might easily have misled him into considering this American form distinct. In the Cambridge Museum I have seen a specimen of *prasina* labeled *herbacea* by Mr. Grote; it is unspread and might easily serve as type of Guenée's description. The type is in collection "Marchand"; but what has become of this I do not know.

A. apposita Grt.*

1878. Grt., Bull. Geol. Surv., IV, 170, *Agrotis.*
1883. Grt., Papilio, III, 78, *Agrotis.*

HABITAT.—California; Vancouver; Colorado.

The type in the British Museum agrees very well with the specimens I have had before me from American collections.

Genus **PLATAGROTIS** Smith.

1890. Smith, Bull. U. S. Nat. Mus., No. 38, 43.

P. speciosa Hbn.*

1815. Hbn., Lep. Eur., Noct., 491, *Noctua.*
1816. Hbn., Verzeichniss, 218, *Eurois.*
1852. Gn., Sp. Gen., Noct., II, 80, *Aplecta.*
1857. Wlk., C. B. Mus., Het., XI, 553, *Eurois.*
1866. Moeschl., Wien. Ent. Monatschr., VIII, 196, *Agrotis.*
1883. Moeschl., Stett. Ent. Zeit., XLIV, 117, *Agrotis.*
perquirita Morr.
1874. Morr., Proc. Bost. Soc. N. H., XVII, 136, *Polia.*
1880. Grt., Bull. Bkln. Ent. Soc., III, 37, pr. syn.
baileyana Grt.
1879. Grt., No. Am. Ent., I, 92, *Agrotis.*
1880. Grt., Can. Ent., XII, 185, pr. syn.
1880. Grt., Bull. Bkln. Ent. Soc., III, 37, pr. syn.
mixta Wlk.
1856. Wlk., C. B. Mus., Het., IX, 62, *Acronycta.*
1882. Grt., Ill. Essay, 39, pr. syn.
var. **arctica** Zett.
1839. Zett., Ins. Lapl., 339.
1864. Wlk., Stett. Ent. Zeit., 180, pr. var.

HABITAT.—Adirondack Mountains; White Mountains; Vermont; Canada; northern and mountainous Europe.

The bibliography of the variety *arctica* is from Staudinger, and the synonymy is well established. I have seen the Grote, Morrison, and Walker types, and there is no doubt of their identity. The Walker type only is in the British Museum; Mr. Grote's type is in the Dr. Bailey collection at Albany; Mr. Morrison's type is in the Graef collection.

P. pressa Grt.*

1874. Grt., Trans. Am. Ent. Soc., v, 90, *Eurois.*
1875. Grt., Check List, pl. I, f. 7, *Eurois.*
1882. Grt., New List, 26, *Agrotis.*

HABITAT.—Canada in July; Massachusetts in June; New York in July and August. Northern, Eastern, Middle, and Central States.

The type specimen in the British Museum is like the examples representing this species in American collections.

P. condita Gn.*

1852. Gn., Sp. Gen., Noct., II, 78, pl. 8, f. 5, *Aplecta.*
1857. Wlk., C. B. Mus., Het., XI, 556, *Eurois.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 12, *Mamestra.*
1881. Grt., Can. Ent., XIII, 127, (transl. desc.).
1891. Smith, Proc. U. S. Nat. Mus., XIV, 270, ?=*trabalis.*
trabalis Grt.
1877. Grt., Can. Ent., IX, 198, *Agrotis.*

HABITAT.—Massachusetts in June; Canada; Middle, Eastern, and Northern States.

Guenée's type, as I suspected, is like Mr. Grote's species, the type of the latter being with Dr. Thaxter, in whose collection I have seen it.

P. sincera H.-Sch.

1851. H.-Sch., Eur. Schmett., II, 412, *Agrotis.*

HABITAT.—Labrador.

P. imperita Hbn.*

1823. Hbn., Zutræge, ff., 447, 448, *Ogygia.*
1857. Wlk., C. B. Mus., Het., X, 333, *Agrotis.*
1880. Grt., Can. Ent., XII, 118, *Agrotis.*
1883. Moeschl., Stett. Ent. Zeit., XLIV, 117, *Agrotis.*
comparata Moeschl.
1862. Moeschl., Wien. Ent. Monatschr., VI, 131, pl. I, f. 5, *Agrotis.*
1875. Grt., Check List, 6, pr. syn.
1883. Moeschl., Stett. Ent. Zeit., XLIV, 117, pr. syn.
saxigena Morr.
1874. Morr., Proc. Bost. Soc. N. H., XVII, 162, *Agrotis.*
1882. Grt., New List, 24, pr. syn.
discitincta Wlk.
1856. Wlk., C. B. Mus., Het., IX, 27, *Bryophila.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 8, *Jaspidia.*
1882. Grt., Ill. Essay, 40, ?*Agrotis.*
1891. Butler, Entomologist, XXIV, 238, pr. syn.

HABITAT.—H. B. Terr.; Labrador; mountains of Northern and Middle States.

Mr. Butler has correctly referred Walker's type. Mr. Moeschler agrees that his species is Hübner's *imperita*, and Mr. Morrison's type in the Graef collection also refers to this same species.

Genus **EUERETAGROTIS** Smith.

1890. Smith, Bull. U. S. Nat. Mus., No. 38, 47.

E. sigmoides Gn.*

1852. Gn., Sp. Gen., Noct., I, 325, *Noctua*.
1856. Wlk., C. B. Mus., Het., x 400, *Graphiphora*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 9, *Agrotis*.

HABITAT.—Canada; Northern, Eastern, Middle, and Central States, June to August.

The specimens in the U. S. Nat. Mus. collection, and in American collections generally, agree with the type which is in the British Museum.

E. perattenta Grt.*

1874. Grt., Can. Ent., VI, 131, *Agrotis*.
1882. Grt., Ill. Essay, 51, pl. I, f. 7, *Agrotis*.

HABITAT.—Canada; Maine to Texas; west to the Mississippi Valley; New York and Massachusetts in June, July, and August.

A specimen labeled *sigmoides* var., by Guenée, is like Mr. Grote's type, both in the British Museum.

E. attenta Grt.*

1874. Grt., Can. Ent., VI, 131, *Agrotis*.

HABITAT.—Northern and eastern United States; Canada; Maine in July.

The species is correctly named in American collections. The type is in the British Museum. A specimen marked "type" by Mr. Morrison is in the National Museum.

Genus **ABAGROTIS** Smith.

1890. Smith, Bull. U. S. Nat. Mus., No. 38, 49.

A. erratica Smith.*

1890. Smith, Bull. U. S. Nat. Mus., No. 38, 50, *Abagrotis*.

HABITAT.—Sierra Nevada, California, in September.

Types of this species are in the collection U. S. National Museum, and in those of Messrs. Edwards and Neumoegen.

Genus **SEMIOPHORA** Steph.

1829. Steph., Ill. Brit. Ent. Haust., II, 138.

S. elimata Gn.*

1852. Gn., Sp. Gen., Noct., I, 333, *Noctua.*
1856. Wlk., C. B. Mus., Het., x, 400, *Graphiphora.*
1883. Grt., Bull. Geol. Surv., VI, 566, *Agrotis.*
dilucida Morr.
1875. Morr., Proc. Ac. Nat. Sci. Phil., XXVII, 55, *Agrotis.*
1878. Grt., Bull. Geol. Surv., IV, 170, *Agrotis.*
1879. Butler, Trans. Ent. Soc. Lond., 1889, 385, pr. syn.
var. **badicollis** Grt.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 136, pl. 4, f. 18, *Ammaconia.*
1875. Grt., Can. Ent., VII, pl. I, f. 12, *Agrotis.*
1875. Morr., Proc. Ac. Nat. Sci. Phil., XXVII, 55, *Agrotis.*
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 51, pr. syn.
var. **janualis** Grt.*
1878. Grt., Bull. Geol. Surv., IV, 169, *Agrotis.*
1891. Smith, Bull. U. S. Nat. Mus., No. 38, 51, pr. syn.

HABITAT.—Maine to Georgia; Canada, July and August; New York, June to September; Washington, D. C., in September.

The types of Mr. Grote's species are in the British Museum, and so is also *elimata* Gn. With them are specimens labeled *dilucida* by Mr. Grote, and these are exactly like Guenée's species. Mr. Morrison labeled a number of specimens as "type" and I have seen several of them in collections. They include specimens like Guenée's type and also like Mr. Grote's *janualis.* Mr. Morrison pointed out some of the characters differentiating his species from *elimata;* but these are not essential. As the forms stand in the British Museum, they look like good species; *elimata* rather more gray with the markings well defined and the apices of primaries distinct; *badicollis* much like it in wing form and markings, but still paler and with a contrasting pale collar; *janualis* rounder winged, apices more obtuse, markings almost obsolete. In the large series in the U. S. National Museum the differences seem to vanish; but none of the specimens are like typical *badicollis*, which I never saw previously. Mr. Thaxter also has types of Mr. Grote's species. To differentiate the various forms I have given varietal rank to Mr. Grote's names. Dr. Lintner also has a "type" of *badicollis.*

S. opacifrons Grt.*

1878. Grt., Bull. Geol. Surv., IV, 170, *Agrotis.*
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 97, *Noctua.*

HABITAT.—New York and northward.

The male type in the British Museum has pectinated antennæ and the wing form of *elimata.* The specimens before me when writing the monograph were females only, and I failed to recognize the true relationship of the species.

S. tenebrifera Wlk.*

1865. Wlk., C. B. Mus., Het., XXXIII, 714, *Hadena.*
1891. Smith, Can. Ent., XXIII, 120, *Semiophora.*
catherina Grt.
1874. Grt., Can. Ent., VI, 116, *Matuta.*
1875. Grt., Buff. Bull., I, 124, *Matuta.*
1875. Grt., Can. Ent., VII, pl. I, f. 7, *Matuta.*
1880. Grt., Can. Ent., XII, 187, *Agrotis.*
1891. Smith, Can. Ent., XXIII, 120, pr. syn.
manifestolabes Morr.
1874. Morr., Proc. Bost. Soc. N. H., XVII, 166, *Agrotis.*
1880. Grt., Can. Ent., XII, 187, = *catherina.*

HABITAT.—Northern, Eastern, and Middle States; Canada; May.

The type of Walker's species, from the Bethune collection, is now in the collection of the National Museum. The specimen of *catherina* in the British Museum does not seem to be the type; but is the species Mr. Grote has always so determined. Mr. Morrison's type is now in the Tepper collection, and agrees in all respects with Mr. Grote's specimens, and of course, therefore, as well with Walker's.

Genus **PACHNOBIA** Gn.

1852. Gn., Sp. Gen., Noct., I, 341.

P. monochromatea Morr.

1874. Morr., Proc. Bost. Soc. N. H., XVII, 165, *Agrotis.*

HABITAT.—Massachusetts, in June.

A specimen labeled by Mr. Morrison, and probably a type, is in the collection Boston Society of Natural History. A specimen labeled "type" is in the Neumogen collection.

P. manifesta Morr.

1875. Morr., Proc. Bost. Soc. N. H., XVIII, 116, *Agrotis.*

HABITAT.—New Jersey; Long Island, New York.

The types are in the Tepper and Neumogen collections.

P. littoralis Pack.*

1868. Pack., Proc. Bost. Soc. N. H., XI, 36, *Agrotis.*
1871. Stgr., Cat. Lep. Eur., 114 = *Pachnobia carnea?*
1891. Smith, Bull. U. S. Nat. Mus., No. 38, 205, *Agrotis.*

HABITAT.—Labrador, Caribou Island.

The type of this species is in the Museum of Comparative Zoology at Cambridge. I failed to find the type at Salem, in the Peabody Museum; but matters were there in great confusion. Since that time the insects have been transferred to Cambridge, and what remains of the type is found there. Staudinger's suggestion that it may be a form of *carnea* is contradicted by the antennal characters; but the reference to *Pachnobia* is correct. It looks like *pectinata* Grt., with the maculation scarcely traceable, and there is no difficulty in recognizing the species. A specimen marked "type" by Mr. Morrison is in the National Museum.

P. pectinata Grt.*

1874. Grt., Proc. Ac. Nat. Sci. Phil., 207, *Pseudorthosia.*
1876. Grt., Can. Ent., VIII, 17, *Choephora.*
1876. Grt., Bull. Buff. Soc. Nat. Sci., III, 86, *Choephora.*
1882. Grt., New List, 31, *Pseudorthosia.*
ferruginoides Smith.
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 56, *Pachnobia.*

HABITAT.—Colorado, Hall Valley, August; Montana; Black Hills.

I was quite surprised to find that Mr. Grote's type in the British Museum was my species. The specimens originally labeled by me came from Dr. Hulst's collection. Afterwards I found in the Riley collection in the National Museum a specimen labeled by Mr. Morrison "*Pseudorthisia pectinata* type." I therefore did not describe the species in 1887 with the other species named by me. Subsequently I compared the specimen with the original description and concluded that it could not well be intended to apply to this species and renamed it. The National Museum specimen is labeled by me as type, and a "type" is also in the Tepper collection.

[A number of Colorado specimens seen recently make it certain that this is but a form of *littoralis* Pack. *Pectinata* may stand for the variety with distinct median lines.]

P. haesitans Wlk.

1856. Wlk., C. B. Mus., Het., x, 329, *Agrotis.*

HABITAT.—Rocky Mountains.

The type is a well-preserved male, the antennæ distinctly pectinated, the other characters as in *Pachnobia*, save that it has the aberrant, dull, ash-gray color of my *cinerascens*. It is not unlike this latter save in antennal characters. The median lines are single, t. p. line crenate, cell blackish between the ordinary spots.

P. salicarum Wlk.*

1857. Wlk., C. B. Mus. Het., XI, 717, *Hydræcia.*
1882. Grt., Ill. Essay, 42, *Pachnobia.*
orilliana Grt.
1875. Grt., Can. Ent., VII, 154, *Pachnobia.*
1875. Grt., Can. Ent., VII. 227, pl. i, f. 8 = *claviformis.*
1882. Grt., Ill. Essay, 42, pr. syn.
claviformis Morr.
1874. Morr., Proc. Bost. Soc. N. H., XVII, 162, *Agrotis.*
1875. Morr., Proc. Bost. Soc. N. H., XVIII, 115, *Agrotis.*
1880. Grt., Bull. Bkln. Ent. Soc., III; 36 = *orilliana.*
1882. Grt., Ill. Essay, 42 = *salicarum.*

HABITAT.—Massachusetts; Maine; White Mountains and Northward; Canada; Hudson Bay Terr., April and May.

Walker's type is in the British Museum; but I could not find any specimens labeled by Mr. Grote. Mr. Morrison's type is in the Tepper collection, Agricultural College, Michigan.

P. okakensis Pack.

1867. Pack., Proc. Bost. Soc. N. H., XI, 38, *Agrotis.*
1875. Morr., Psyche, I, 42, *Agrotis.*

HABITAT.—Labrador; Mount Washington, July 10.

The type is in the Museum of Comparative Zoölogy at Cambridge.

P. fishii Grt.*

1878. Grt., Bull. Geol. Surv., IV., 175, *Agrotis.*

HABITAT.—Oldtown, Maine.

The type is in the British Museum. I have correctly labeled a specimen in the National Museum with this name.

P. elevata Smith.

1891. Smith, Trans Am. Ent. Soc., XVIII, 104, *Pachnobia.*

HABITAT.—Colorado.

The type is in Mr. Neumoegen's collection.

P. carnea Thunb.*

1788. Thunb., Mus. Nat. Ac. Ups., Diss., IV, p. 56, 72, f. 1.
1816. Hbn., Verzeichniss, 222, *Diarsia.*
1852. Gn., Sp. Gen., Noct., I, 342, *Pachnobia.*
1856. Wlk., C. B. Mus., Het., X, 415, *Pachnobia.*
1860. Moeschl., Wien. Ent. Monatschr., IV, 163, *Pachnobia.*
1866. Moeschl., Wien. Ent. Monatschr., VIII, 197, *Pachnobia.*
1868. Pack., Proc. Bost. Soc. N. H., XI, 39, *Agrotis.*
1875. Grt., Psyche, I, 77, 100, *Agrotis.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 160, *Pachnobia.*

ab. **cinerea** Stgr.

1861. Stgr., Stett. Ent. Zeit.. XXII, 369, *Pachnobia.*

HABITAT.—Labrador; Lapland; Circumpolar; Mount Washington, N. H.

For the European synonymy and bibliography, Staudinger should be consulted. I have not seen Thunberg's original work. In the British Museum collections Mr. Butler has confused three species under this name.

P. cinerascens Smith.*

1891. Smith, Trans. Am. Ent. Soc., XVIII, 103, *Pachnobia.*

HABITAT.—Alameda County, California, September and October.

The types are in the collections of the U. S. National Museum.

P. wockei Moeschl.*

1862. Moeschl., Wien. Ent. Monatschr., VI, 130, pl. I, f. 1, 2, *Agrotis.*
1883. Moeschl., Stett. Ent. Zeit., XLIV, 117, *Agrotis.*

scropulana, Morr.

1874. Morr., Proc. Bost. Soc. N. H., XVII, 165, *Agrotis.*
1875. Morr., Psyche, I, 42, *Agrotis.*
1875. Grt., Psyche, I, 77=*carnea.*

1875. Morr., Psyche, I, 85, an sp. dist.
1875. Grt., Psyche, I, 100 *carnea*.
1885. Smith, Ent. Amer., I, 14, pr. syn.
1885. Smith, Stett. Ent. Zeit., XLVI, 223, pr. syn.

HABITAT.—Mount Washington, N. H.; Labrador.

Mr. Moeschler's type has been in my hands and has been compared by me with Morrison's type from the Graef collection. The species is in the British Museum, mixed with *carnea*.

Genus **SETAGROTIS** Smith.

1890. Smith, Bull. U. S. Nat. Mus., No. 38, 59.

S. planifrons Smith.

1890. Smith. Trans. Am. Ent. Soc., XVII, 42, *Agrotis*.

HABITAT.—Northwest British Columbia.

The type is in Mr. Neumoegen's collection.

S. congrua Smith.*

1890. Smith, Trans. Am. Ent. Soc., XVII, 43, *Agrotis*.

HABITAT.—Oregon.

The type is in the National Museum collection.

S. vernilis Grt.*

1879. Grt., Can. Ent., XI, 57, *Agrotis*.
1879. Grt., No. Am. Ent., I, 38, *Agrotis*.
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 42, *Adelphagrotis*.

HABITAT.—Colorado, Glenwood Springs in August and September; Nevada; Sierra Nevada, California.

S. infimatis Grt.

1880. Grt., No. Am. Ent., I, 93. *Agrotis*.
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 42, *Adelphagrotis*.

HABITAT.—California; Washington.

The types of both *vernilis* and *infimatis* are in the British Museum, and both are males. The specimens I had theretofore seen were all females, and my guess as to the character of the male antenna proved erroneous. Removed to *Setagrotis*, the characters pointed out by me still hold to separate the species. From the two forms described by me they are entirely distinct.

Genus **AGROTIS** Ochs.

1816. Ochs., Schmett. Eur., IV, 66.

A. badinodis Grt.*

1874. Grt., Can. Ent., VI, 13, *Agrotis*.

HABITAT.—Maryland; New York; Canada; Middle, Eastern, and Northern United States in August and September; Texas in November.

The type is in Dr. Lintner's collection.

A. violaris G. & R.

1868. G. & R., Trans. Am. Ent. Soc., I, 353, pl. 7, f. 59, *Agrotis*.

HABITAT.—Pennsylvania; Middle States.

The specimen in the British Museum is not the type. The type is in the Museum of Comparative Zoölogy at Cambridge, and is marked New York, Mrs. Bridgham. There is also a specimen in the collection of the American Entomological Society at Philadelphia, labeled by Mr. Grote; but not marked type. It is, however, likely that this specimen is the original of the figure illustrating the description.

A. aurulenta Smith.*

1890. Smith, Bull. U. S. Nat. Mus., No. 38, 215, *Agrotis*.

HABITAT.—Colorado, foot-hills near Denver, Platte Cañon, 6,500 feet; Omaha, Nebraska, in June; Arizona.

The types are in the National Museum collection.

A. ypsilon Rott.*

1776. Rott., Naturf, XLI, 141, *Noctua*.
1816. Hüb., Verzeichniss, 225, *Exarnis*.
1875. Speyer, Stett. Ent. Zeit., XXXVI, 135, *Agrotis*.
1883. Saund., Fruit Insects, 327, f. 338, *Agrotis*.
1889. Butler, Trans. Ent. Soc. Lond., 380, *Peridroma*.
suffusa S. V.
1776. S. V., p. 80, *nomen Catalogi*.
1852. Gn., Sp. Gen., Noct., I, 268, *Agrotis*,
1857. Wlk., C. B. Mus., Het., X, 309, *Agrotis*.
telifera Harr.
1841. Harr., Rept. Ins. Mass., *Agrotis*.
1842. Harr., Inj. Ins., 323, *Agrotis*.
1864. Grt., Proc. Ent. Soc. Phil., III, 95, pr. syn.
1868. Riley, Rept. Ins. Mo., I, 28, 80, pl. I, f. 8–10, *Agrotis*.
1881. Riley, Index and Suppl. to Mo. Repts., 55, pr. syn.
idonea Cram.
1782. Cram., Exot., III, 150, 275, f. H, *Phalæna*.
1852. Gn., Sp. Gen., Noct., I, 269, pr. var.
1856. Wlk., C. B. Mus., Het., 309, pr. syn.

HABITAT.—United States and Canada, June to October; Europe.

This common and well-known species has a large European bibliography, and has been frequently described in all its stages in economic publications. What has been above given will serve to authenticate the synonymy so far as necessary here.

A. geniculata G. & R.*

1868. G. & R., Trans. Am. Ent. Soc., I, 349, pl. 7, f. 54, *Agrotis*.

HABITAT.—Northern, Eastern, and Middle States; Canada; Massachusetts in August; District of Columbia in September.

The specimen in the British Museum agrees with the determination usual in American collections, but it is not the type. The type is in the collection of the American Entomological Society, labeled by Mr. Grote, but not marked "type." It seems to be the original of the figure cited above, and in view of Mr. Grote's statement, quoted in the preface hereto, must be considered "type."

A. ingeniculata Smith.

1890. Smith, Bull. U. S. Nat. Mus., No. 38, 216, *Agrotis*.

HABITAT.—Colorado.

The type is with Mr. J. Angelman, Newark. An exact duplicate is in the Coll. U. S. National Museum.

A. bollii Grt.

1883. Grt., Bull. Geol. Surv., VI, 160, *Agrotis*.
hilaris || Grt.
1880. Grt., Can. Ent., XII, 153, *Agrotis*.

HABITAT.—Texas.

The type is in the British Museum, and is a very distinct species, which I had not before seen.

A. dapsilis Grt.

1883. Grt., Bull. Geol. Surv., VI, 582, *Agrotis*.

HABITAT.—Florida.

The type is with Dr. Thaxter, in whose collection I have seen it. It is altogether impossible to locate it generically because of its imperfect condition.

A. hero Morr.

1876. Morr., Proc. Bost. Soc. N. H., XVIII, 238, *Agrotis*.
1880. Grt., Bull. Geol. Surv., VI, 160, *Agrotis*.

HABITAT.—Massachusetts.

I have never seen this species and do not know where the type can be found. It is not likely that this name refers to a form distinct from any other here given; but I can not at present place it.

A. nanalis Grt.

1881. Grt., Can. Ent., XIII, 131, *Agrotis*.

HABITAT.—Nevada.

The type in the British Museum is evidently from Mr. Tepper. It is an imperfect female, with smooth front, no fore legs, and broad, frail wings. It is obscurely fuscous brown or black, ordinary spots fused as in *hollemanni*, but faint. I never before saw it, and without a male can not give it a definite place.

A. tenuicola Morr.

1874. Morr., Proc. Bost. Soc. N. H., XVII, 163, *Agrotis*.

HABITAT.—New York.

It is more than likely that this will turn out a form of *Noctua conflua*; but I have nothing answering nearly enough to it to make sure. I am utterly in the dark as to the location of the type.

In both the Graef and Neumoegen collections there are specimens marked *tenuescens* Morr., type. These can not well have served as the types for the description of *tenuicola*, and are related to *simplaria* and *incivis* rather than *conflua*. I have adopted Mr. Morrison's name for the specimens so labeled.

Genus **PERIDROMA** Hbn.

1816. Hbn., Verzeichniss, 227.

P. occulta Linn.*

1767. Linn., Syst. Nat., IV, 514, *Noctua*.
1816. Hbn., Verzeichniss, 218, *Eurois*.
1852. Gn., Sp. Gen., Noct., II, 76, *Aplecta*.
1857. Wlk., C. B. Mus., Het., XI, 551, *Eurois*.
1874. Grt., Can. Ent., VI, 13, 70, *Eurois*.
1876. Speyer, Stett. Ent. Zeit., XXXVI, 204, *Aplecta*.
docilis Grt.
1883. Grt., Bull. Geol. Surv., VI., 259, *Agrotis*.
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 143, =*perexcellens*.

HABITAT.—Northern and Eastern States; Canada; Colorado, Glenwood Springs in October; British Columbia; Massachusetts in June; Canada, New York and Illinois in August.

In the British Museum is a specimen marked *docilis* Grt. type, which is without any doubt a form of *occulta*. It is from Snow, Colorado, No. 894, and is entirely different from the specimen marked *docilis* in the Edwards collection. From the description and Mr. Grote's remarks on the species, I am persuaded that a form of *perexcellens* was really what Mr. Grote intended to describe and that Mr. Edwards's specimen represents the form to which the name should have been attached. The small specimen of *occulta*, similar in color, probably escaped notice among the other specimens and received the type label. It makes no practical difference which specimen is accepted as type, since in either case the name goes into the synonymy.

P. præfixa Morr.

1875. Morr., Proc. Bost. Soc. N. H., XVIII, 117, *Agrotis*.

HABITAT.—Rocky Mountains.

The type is in the collection of Mr. Julius Meyer.

P. astricta Morr.*

1874. Morr., Proc. Bost. Soc. N. H., XVII, 135, *Eurois*.

HABITAT.—New York in July; New Hampshire and Northern States; Canada; Colorado.

The type is in the National Museum.

P. grandipennis Grt.

1883. Grt., Ann. and Mag. N. H., 1883, 51, *Agrotis.*
1884. Grt., Trans. Kans. Ac. Sci., VIII, 51 (Reprint).

HABITAT.—New Mexico.

Types are in the Neumoegen and Snow collections.

P. saucia Hbn.*

1816. Hbn., Samml. Eur. Schmett., Noct., 378, *Noctua.*
1816. Hbn., Verzeichniss, 227, *Peridroma.*
1825. Tr., Schmett., Eur., V, 149, *Agrotis.*
1852. Gn., Sp. Gen., Noct., I, 271, *Agrotis.*
1856. Wlk., C. B. Mus., Het., X, 311, *Agrotis.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 135, *Agrotis.*
1875. Speyer, Stett. Ent. Zeit., XXXVI, 134, *Agrotis.*
1883. Saund., Fruit Insects, 106, ff. 100—103, *Agrotis.*
inermis Harr.
1841. Harr., Rept. Ins. Mass., *Agrotis.*
1842. Harr., Inj. Ins., 323, *Agrotis.*
1869. Riley, 1st Rept. Ins. Mo., 72, pl. 1, ff. 1-4, *Agrotis.*
1873. Pack., Our Common Insects, 199, f. 210, *Agrotis.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 135, pr. syn.
1876. Riley, 8th Rept. Ins. Mo., 37, ff. 24, 25, *Agrotis.*
1881. Riley, Index and Suppl. to Mo. Repts., 55, pr. syn.
ortonii Pack.
1869. Pack., 1st Rept. Peab. Ac. Sci., 63, *Agrotis.*
1874. Morr., Proc. Bost. Soc. N. H., XVII, 210, pr. syn.
var. **margaritosa** Haw.
1810. Haw., Lepid. Britt., 157, *Noctua.*
1852. Gn., Sp. Gen., Noct., I, 271, pr. syn.
1875. Speyer, Stett. Ent. Zeit., XXXVI, 134, var. pr.

HABITAT.—North and South America; Europe; Asia. Canada, July and August; New York and Illinois, August and September; District of Columbia, September and October; California in April and May.

This species has a large economic bibliography. In the British Museum Mr. Butler has placed a lightly-marked specimen of *turris* Grt., with typical *saucia* and has published them as identical. They differ structurally. A specimen labeled *inermis* is in the Harris collection at Boston.

P. rudens Harv.*

1874. Harv., Bull. Buff. Soc. Nat. Sci., II, 271, *Agrotis.*

HABITAT.—Texas in December and May.

P. pellucidalis Grt.*

1883. Grt., Bull. Geol. Surv., VI, 567, *Agrotis.*
rudens Harv.
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 5, *Agrotis.*

HABITAT.—Texas in December and May; Colorado, Manitou in June.

The types of both the above species are in the British Museum, and are as identified in American collections.

P. incivis Gn.*

1852. Gn., Sp. Gen., Noct., I, 274, *Agrotis.*
1856. Wlk., C. B. Mus., Het., X, 330, *Agrotis.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 303, *Agrotis.*
1874. Morr., Proc. Bost. Soc. N. H., XVII, 164, *Agrotis.*
1880. French, Can. Ent., XII, 14 (larva sub nom. *lubricans*).
1882. French, Can. Ent., XIV, 240, *Agrotis.*
alabamæ Grt.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 159, *Anicla.*
1875. Grt., Can. Ent., VII, 102, pr. syn.

HABITAT.—Massachusetts in September; District of Columbia to Florida; Mississippi; Illinois; Texas, November, December, and June; California.

The types of both *incivis* and *alabamæ* are in the British Museum, and both names refer to the species known as *incivis* in our collections. I have not given the bibliography relating to *infecta* Ochs., and *præcox*‡ Hbn., because I consider the synonymy doubtful. It is given in the Bull. U. S. Nat. Mus., No. 38, p. 72.

P. tenuescens Smith.

1890. Smith, Bull. U. S. Nat. Mus., No. 38, 73, *Peridroma.*

HABITAT.—Nebraska.

The types are in the Graef and Neumoegen collections, labeled by Mr. Morrison as types of the name, but not described.

P. simplaria Morr.*

1874. Morr., Proc. Bost. Soc. N. H., XVII, 164, *Agrotis simplicius.*
1875. Morr., Proc. Bost. Soc. N. H., XVII, 210, *Agrotis simplaria.*
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 5, *Agrotis simplicia.*
1880. Grt., Bull. Geol. Surv., VI, 108, *Agrotis.*

HABITAT.—Texas, March, April, October, and November.

The type, sub nom. *simplicius* is in the Museum of Comparative Zoölogy at Cambridge.

P. digna Morr.*

1875. Morr., Proc. Bost. Soc. N. H., XVIII, 115, *Agrotis.*
nigrovittata Grt.
1875. Grt., Bull. Buff. Soc. Nat. Sci., III, 77, *Agrotis.*

HABITAT.—Texas, May and August.

Mr. Grote's type is in the British Museum; that of Mr. Morrison is in the Tepper collection. The two are specifically identical.

Genus **NOCTUA** Linn.

1758. Linn., Systema Naturæ.

N. baja Fabr.*

1787. Fabr., Mant. Ins., II, 175, *Noctua.*
1791. Oliv., Enc. Meth., VIII, 315, *Noctua.*
1793. Fabr., Ent. Syst., III, 2, 109, *Noctua.*
1793. Gmel., ed. Linn. Syst. Nat., 2579, *Noctua.*

1816. Hbn., Verzeichniss, 222, *Amathes.*
1834. Hbn., Schmett. Eur., Noct., IV, pl. 25, f. 119, *Noctua.*
1852. Gn., Sp. Gen., Noct., I, 335, *Noctua.*
1856. Wlk., C. B. Mus., Het., X, 396, *Graphiphora.*
1875. Speyer, Stett. Ent. Zeit., XXXVI, 122, *Agrotis.*
1876. Grt., Bull. Buff. Soc. Nat. Sci., III, 80, *Agrotis.*

HABITAT.—United States and Europe; Northern States, July, August, and September.

N. normaniana Grt.*

1874. Grt., Trans. Am. Ent. Soc., V, 89, *Agrotis.*
triangulum ‡ Auct.
1852. Gn., Sp. Gen., Noct., I, 331, *Noctua.*
1856. Wlk., C. B. Mus., Het., X, 390, *Graphiphora.*
1868. Beth., Can. Ent., I, 86, *Graphiphora.*
1874. Grt., Trans. Am. Ent. Soc., V, 89, pr. syn.
obtusa Speyer.
1875. Speyer, Stett. Ent. Zeit., XXXVI, 124, 126, *Agrotis,* ? pr. syn.
1882. Grt., New List, 24, pr. syn.

HABITAT.—Northern, Middle, and Eastern States; Canada, July to September; New York, Illinois, Massachusetts, August and September; District of Columbia in September.

Mr. Grote's type is in the British Museum, and is correctly identified in American collections.

N. bicarnea Gn.*

1852. Gn., Sp. Gen., Noct., I, 329, *Noctua.*
1856. Wlk., C. B. Mus., Het., X, 400, *Graphiphora.*
1889. Butler, Trans. Ent. Soc. Lond., 1889, 383, *Amathes.*
plagiata Wlk.
1865. Wlk., C. B. Mus., Het., XXXII, 664, *Mamestra.*
1882. Grt., Ill. Essay, 44, pr. syn.
1889. Butl., Trans. Ent. Soc. Lond., 1889, 383, pr. syn.

HABITAT.—United States east of the Rocky Mountains; Colorado; British Columbia; Northern States, July to September.

Mr. Grote's reference of *plagiata* to *bicarnea* is correct. Both the types are in the British Museum.

N. treatii Grt.*

1875. Grt., Can. Ent., VII, 186, *Agrotis.*

HABITAT.—Massachusetts.

The specimen in the National Museum is like Mr. Grote's type in the British Museum, save that it is a much larger and finer example.

N. conchis Grt.

1879. Grt., No. Am. Ent., I, 43, *Agrotis.*
1880. Grt., Trans. Kans. Ac. Sci., VII, 66, *Agrotis.*
1882. Grt., Ill. Essay, 51, pl. I, f. 8, *Agrotis.*

HABITAT.—Colorado; New Mexico.

The type is in the British Museum, and is well represented by the figure in the Illustrated Essay.

N. c-nigrum Linn.*

1758. Linn., Syst. Nat., ed. x, 516, *Noctua.*
1767. Linn., Syst. Nat., ed. xii, 852, *Noctua.*
1816. Hbn., Verzeichniss, 223, *Megasema.*
1852. Gn., Sp. Gen., Noct., i, 328, *Noctua.*
1856. Wlk., C. B. Mus., Het., x, 389, *Graphiphora.*
1875. Speyer, Stett. Ent. Zeit., xxxvi, 126, *Agrotis.*
1883. Edw., Papilio, iii, 133, *Agrotis.*

HABITAT.—North America and Europe; New York, June to October; Illinois, August and September.

The economic bibliography is large, and the species is frequently referred to in publications in such manner only as not to merit citation here.

N. hospitalis Grt.

1882. Grt., Can. Ent., xiv, 184, *Agrotis.*
1886. Grt., Can. Ent., xviii, 220=*perconflua.*
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 83, an sp. dist.

HABITAT.—Northern New York.

The type is in the collection of the late W. W. Hill, Albany, N. Y.

N. jucunda Wlk.†

1856. Wlk., C. B. Mus., Het., x, 399, *Graphiphora.*
1889. Butler, Trans. Ent. Soc. Lond., 1889, 382, *Amathes.*
conflua ‡ Grt.
1874. Grt., 6th Rept. Peab. Ac. Sci., App., 25, *Agrotis.*
1874. Grt., Can. Ent., vi, 71, *Agrotis.*
1889. Butler, Trans. Ent. Soc. Lond., 1889, 382, pr. syn
perconflua Grt.
1876. Grt., Ann. Lyc. Nat. Hist. N. Y., xi, 304, *Agrotis.*
var. **esurialis** Grt.
1881. Grt., Can. Ent., xiii, 131, *Agrotis.*

HABITAT.—Northern and Eastern States; Canada and northward; Washington, August.

The type of *perconflua* is like the type of *jucunda*, and Mr. Grote's name sinks. *Perconflua* is undoubtedly the species Mr. Grote has written of as *conflua;* but the specimen in the British Museum, labeled *conflua* by Mr. Grote, is *rubifera.* The type of *esurialis*, also in the Museum, is without doubt the same species, differing only in that the orbicular is imperfectly closed superiorly, and the cell between the ordinary spots more prominent than usual. The specimen is from Washington, and is perhaps a good geographical race.

N. phyllophora Grt.

1874. Grt., Bull. Buff. Soc. Nat. Sci., ii, 61, *Agrotis.*
1889. Butler, Trans. Ent. Soc. Lond., 1889, 382, *Amathes.*
1891. Butler, Entomologist, xxiv, 238=*subporphyrea.*
dahlii ‡ Beth.
1868. Beth., Can. Ent., i, 86, *Graphiphora.*
eriensis Grt.
1878. Grt., Bull. Geol. Surv., iv, 172, *Agrotis.*

HABITAT.—Northern, Middle, and Eastern States; Canada in July; Massachusetts and New York, June and July.

Mr. Butler has succeeded in mixing up several distinct species under this name. *Subporphyrea*, *phyllophora*, *alternata*, and *variata* are all good species. On the other hand the type of *eriensis* is simply a somewhat suffused form, in which the basal and costal spaces are mottled with yellow.

N. rubifera Grt.*

1875. Grt., Can. Ent., VIII, 207, 227, pl. i, f. 14, *Agrotis.*
rubi ‡ Grt.
1875. Grt., Can. Ent., VII, 207, *Agrotis.*
dahlii var. A, Gn.
1852. Gn., Sp. Gen., Noct., I, 332, *Noctua.*
1856. Wlk., C. B. Mus., Het., X, 393, *Graphiphora.*

HABITAT.—Northern and Eastern States; Canada, in July; New York, in August.

The type is in the British Museum, and is the species I have described in the monograph under this name.

N. oblata Morr.*

1875. Morr., Proc. Bost. Soc. N. H., XVIII, 116, *Agrotis.*
hilliana Harv.
1878. Harv., Can. Ent., X, 55, *Agrotis.*
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 86, pr. syn.

HABITAT.—Anticosti; New York; Nevada; Sierra Nevada, California.

A specimen of *hilliana* marked "type" is in the British Museum, and another so marked is in Mr. Hill's collection. They agree with each other and also agree with specimens of the same species marked "*oblata* type," by Mr. Morrison. A number of good specimens are in the National Museum, agreeing with Dr. Harvey's types. The original type of *oblata* is in Dr. Strecker's collection.

N. rosaria Grt.*

1878. Grt., Bull. Geol. Surv., IV, 172, *Agrotis.*

HABITAT.—California; British Columbia; Colorado, August.

The type is in the British Museum. The male is very like the eastern *rubifera* ♂, and specimens of this sex resemble each other much more than do the females.

N. rava H. Sch.*

1850. H. Sch., Schmett. Eur., VI, 59, Suppl. f., *Agrotis.*
1860. Moeschl., Wien. Ent. Monatschr., IV, 367, *Agrotis.*
dissona ‡ Pack.
1867. Pack., Proc. Bost. Soc. N. H., XI, 38, *Agrotis.*
umbrata Pack.
1867. Pack., Proc. Bost. Soc. N. H., XI, 37, *Agrotis.*

HABITAT.—Labrador; Nova Scotia.

Dr. Packard's type is in the Museum of Comparative Zoölogy, Cambridge.

N. fennica Tausch.*

1837. Eversm., Bull. Soc. Imp. Mosc., I, t. 13, 4, *Noctua*.
1852. Gn., Sp. Gen., Noct., I, 270, *Agrotis*.
1857. Wlk., C. B. Mus., Het., X, 311, *Agrotis*.
1874. Grt., Can. Ent., VI, 155, *Agrotis*.
intractuta Wlk.
1857. Wlk., C. B. Mus., Het., XI, 884, *Hadena*.

HABITAT.—Northern New York, northward to Alaska; Canada in August; Massachusetts in September.

Mr. Walker's type in the British Museum is a very fair specimen and readily recognizable as *fennica*.

N. plecta Linn.*

1761. Linn., Fn. Suec., 321, *Noctua*.
1767. Linn., Syst. Nat., ed. XII, 2, 851, *Noctua*.
1816. Hbn., Verzeichniss, 223, *Ochropleura*.
1852. Gn., Sp. Gen., Het., I, 326, *Noctua*.
1856. Wlk., C. B. Mus., Het., X, 406, *Ochropleura*.
1862. Grt., Proc. Ent. Soc. Phil., I, 218, *Chersotis*.
1874. Morr., Psyche, I, 22, *Agrotis*.
1875. Speyer, Stett. Ent. Zeit., XXXVI, 131, *Agrotis*.
1889. Butler, Trans. Ent. Soc. Lond., 384, *Ochropleura*.
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 89, *Noctua*.

HABITAT.—Canada to Texas; Eastern United States; Europe; Canada, May to August; New York, June, July, to September.

None of the European synonymy is given, and the bibliography relating to *vicaria* Wlk., is also omitted as unnecessary.

N. collaris G. & R.*

1868. G. & R., Trans. Am. Ent. Soc., I, 348, pl. 7, f. 53, *Agrotis*.

HABITAT.—New York, northward to Canada; New York in July; Massachusetts in August; New Hampshire in September.

A specimen labeled by Mr. Grote, and probably the type, though not so marked, is in the collection of the American Entomological Society.

N. juncta Grt.

1878. Grt., Bull. Geol. Surv., IV, 171, *Agrotis*.

HABITAT.—Nova Scotia.

The male type is in the British Museum. It has all the structural characters of the present section, and is most nearly like *collaris*, yet distinct from anything I had before seen.

N. haruspica Grt.*

1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 212, *Agrotis*.
1875. Grt., Proc. Ac. Nat. Sci. Phil., 424, *Agrotis*.
1876. Grt., Bull. Geol. Surv., II, 214, *Agrotis*.
1885. Smith, Ent. Amer., I, 13, *Agrotis*.
1889. Butler, Trans. Ent. Soc. Lond., 382, *Graphiphora*.
unimacula ‖ Morr.

1874. Morr., Proc. Bost. Soc. N. H., XVII, 166, *Agrotis*.
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 212, n. b. l.
grandis Speyer.
1875. Speyer, Stett. Ent. Zeit., XXXVI, 122; var. *augur*.
1876. Speyer, Stett. Ent. Zeit., XXXVII, 201; var. *augur*.
1884. Moeschl., Verh., k. k. Zool-Bot. Ges., 273; var. *augur*.
1885. Smith, Ent. Amer., I, 13, an sp. dist. *augur*.
augur‡ Gn.
1852. Gn., Sp. Gen., Noct., I, 325, *Noctua*.
1856. Wlk., C. B. Mus., Het., X, 387, *Graphiphora*.

HABITAT.—Northern and Eastern United States; Colorado; Utah; Montana; Canada, in July; New York, July and August.

The type is in the British Museum, and is like specimens with the same name in American collections.

N. sierræ Harv.*

1876. Harv., Can. Ent., VIII, 37, *Agrotis*.

HABITAT.—Sierra Nevada, California; Colorado, August.

A specimen in the British Museum is marked "type," in Mr. Grote's handwriting. The species is in no doubt, and is well identified in the National Museum.

N. clemens Smith.*

1890. Smith, Trans. Am. Ent. Soc., XVII, 44, *Agrotis*.

HABITAT.—California, Placer County in June.

Types of this species are in the National Museum and in Mr. Neumoegen's collection.

N. clandestina Harr.*

1862. Harris, Inj. Ins. (Flint ed.), 448, life hist., *Noctua*.
1869. Grt., Trans. Am. Ent. Soc., II, 309, *Agrotis*.
1869. Saund., Can. Ent., II, 35, *Noctua*.
1869. Riley, 1st Rept. Ins. Mo., 79, pl. i, f. 13, *Agrotis*.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 143, *Noctua*.
1875. Speyer, Stett. Ent. Zeit., XXXVI, 131, 317, *Agrotis*.
1881. Riley, Index and Supplt. to Mo. Repts., 55, *Agrotis*.
1883. Saund., Fruit Insects, 108, f. 106, 107, *Agrotis*.
1889. Butler, Trans. Ent. Soc. Lond., 381, = *Spælotis ravida*.
unicolor Wlk.
1856. Wlk., C. B. Mus., Het., IX, 233, *Mamestra*.
1869. G. & R., Trans. Am. Ent. Soc., II, 77, pr. syn.
1877. Grt., Can. Ent., IX, 28, pr. syn.
nigriceps Wlk.
1865. Wlk., C. B. Mus., Het., XXXII, 659, *Mamestra*.
1891. Smith, Can. Ent., XXIII, 119, pr. syn.

HABITAT.—United States, except Southern States and Pacific coast; Canada and Northern States in July and August.

Harris's type is in the Boston Society of Natural History, the type of *nigriceps* is in the National Museum from Dr. Bethune, the type of *unicolor* is in the British Museum. I have seen them all.

N. havilæ Grt.*

1880. Grt., Bull. Geol. Surv., VI, 157, *clandestina* var.
1881. Grt., Papilio, I, 76, an sp. dist.
1881. Butler, Papilio, I, 169, an sp. dist.

HABITAT.—Southern California in June; Colorado.

The type is in the British Museum, and is like the National Museum material in this species.

N. subporphyrea Wlk.

1858. Wlk., C. B. Mus., Het., XIV, 1658, *Mythimna*.
1882. Grt., Ill. Essay, 41, ? *Agrotis*.
1891. Butler, Entomologist, XXIV, 238=*Agr. phyllophora*.

HABITAT.—Georgia.

The female type in the British Museum represents a species I had not before seen. It is imperfect, lacking the abdomen; but the front is smooth; the foretibiæ are spinose and the palpi are as in *clandestina*. It looks like a red *alternata* with all the maculation washed out, leaving only the slightly paler median lines. Mr. Butler has placed *phyllophora*, *alternata*, *varix*, and *variata* under this name as representing one species, and in the Entomologist, XXIV, 238, says: "Walker's type is slightly faded and without abdomen, but is certainly typical *A. phyllophora*, which it will probably supersede." This was published while I was in England, but I did not see it until after my return, else I would have made more detailed comparisons. The specimen did not even suggest *phyllophora* to me, and it can not be that species; first, because it has none of its characteristic markings, and second, because it is from Georgia, while *phyllophora* is decidedly a Northern insect, and has never, in my experience, been taken as far South as Washington, D. C., where there have been good collectors at work. I believe the specimen to be one of those taken by Abbot, and a species which has not been since found. Among the unpublished drawings by Abbot in the British Museum are a number of Noctuidæ that I never saw and that are certainly undescribed. Such species as *Varina ornata* Neum., described only a year or two ago, were figured and the habits noted by Abbot, and the specimens were afterward named by Walker. No one has since collected Lepidoptera systematically on Abbot's old ground, and when that is once done, I have no doubt that *subporphyrea* Wlk. will be rediscovered.

N. piscipellis Grt.

1878. Grt., Can. Ent., X, 233, *Agrotis*.

HABITAT.—Colorado; Nevada; Arizona.

The type is in the British Museum, and is like the specimens so named by me.

N. atrifrons Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 97, *Agrotis.*
1883. Grt., Trans. Kans. Ac. Sci., VIII, 47, *Agrotis.*

HABITAT.—Colorado; Arizona; New Mexico.

The type is in the British Museum.

N. tepperi Smith.

1887. Smith, Proc. U. S. Nat. Mus., X, 452, *Agrotis.*

HABITAT.—Montana.

The type is in the Tepper collection.

N. lubricans Gn.*

1852. Gn., Sp. Gen., Noct., I, 323, *Noctua.*
1856. Wlk., C. B. Mus., Het., X, 398, *Graphiphora.*
1864. Grt., Proc. Ent. Soc. Phil., III, 525, =*clandestina.*
1869. Grt., Trans. Am. Ent. Soc., II, 309; an sp. dist.
associans Wlk.
1858. Wlk., C. B. Mus., Het., XV, 1683, *Mamestra.*
illapsa Wlk.
1857. Wlk., C. B. Mus., Het., XI, 744, *Graphiphora.*
var. **beata** Grt.*
1883. Grt., Ann. and Mag. N. H., 1883, 54, *Agrotis.*
1883. Grt., Trans. Kans. Acad. Sci., VIII, 54, *Agrotis.*
1885. Smith, Can. Ent., XVII, 6, pr. syn.
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 96, pr. var.

HABITAT.—United States generally; Canada; Massachusetts, June to August; Texas, March, July; District of Columbia, May and September; New Mexico in August; Colorado, August.

The types of all save *beata* are in the British Museum. The type of *beata* was given me by Mr. Grote himself, years ago, and is now in the National Museum. All the names refer to the same species.

N. vocalis Grt.

1879. Grt., Can. Ent., XI, 56, *Agrotis.*
1882. Grt., Ill. Essay, 54, pl. II, f. 15, *Agrotis.*
invenusta Grt.
1883. Grt., Trans. Kans. Ac. Sci., VIII, 48, *Agrotis.*

HABITAT.—Colorado, August; Nevada; New Mexico.

The type of *vocalis* is in the British Museum; that of *invenusta* has been in my hands from an American collection; but I have no note as to its present location.

N. pallidicollis Grt.

1880. Grt., Bull. Geol. Surv., VI, 154, *Agrotis.*
cinereocollis‖ Grt.
1876. Grt., Bull. Buff. Soc. Nat. Sci., III, 79, pl. 4, f. 6, *Agrotis.*
1880. Grt., Bull. Geol. Surv., VI, 154, n. b. l.

HABITAT.—California.

The type is in the Henry Edwards collection.

N. pyrophiloides Harv.*

1876. Harv., Can. Ent., VIII, 37, *Agrotis*.
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 213, ? *Agrotis*.

HABITAT.—California.

The type is in the Henry Edwards collection. A well-named specimen, not the type, is in the British Museum.

The present location of the species is tentative merely.

Genus **CHORIZAGROTIS** Smith.

1890. Smith, Bull. U. S. Nat. Mus., 38, 98.

C. auxiliaris Grt.*

1872. Grt., Bull. Buff. Soc. Nat. Sci., I, 196, *Agrotis*.
1875. Grt., Proc. Ac. Nat. Sci. Phil., 1875, 422, *Agrotis*.
1877. Grt., Bull. Geol. Surv., III, 118, *Agrotis*.

HABITAT.—Colorado, September; Texas in May; California; Utah in July.

The type is in the British Museum.

C. introferens Grt.*

1875. Grt., Proc. Ac. Nat. Sci. Phil., 1875, 423, *Agrotis*.
1876. Harv., Bull. Buff. Soc. Nat. Sci., III, 74, pl. 3, f. 10, *Agrotis*.

HABITAT.—Colorado, August; Texas in May; California; Arizona.

The type is in Mr. Graef's collection.

C. soror Smith.*

1887. Smith, Proc. U. S. Nat. Mus., X, 453, *Agrotis*.

HABITAT.—Montana; Texas, April and November.

The type is in the National Museum.

C. agrestis Grt.

1877. Grt., Bull. Geol. Surv., III, 118, var. *auxiliaris*.
mercenaria Grt.
1878. Grt., Bull. Geol. Surv., IV, 171, *Agrotis*.
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 101, pr. syn.
flexilis Morr., MSS.
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 101, pr. syn.

HABITAT.—Kansas; Colorado, August to October; California; Arizona; Texas, April and May; Nebraska; New Mexico.

The types of Mr. Grote's names are in the British Museum collection, and both refer to the same species. A specimen of *agrestis* marked "type," is also in the Museum of Comparative Zoölogy at Cambridge.

C. inconcinna Harv.*

1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 5, *Agrotis*.

HABITAT.—Arizona; Texas in May; Colorado, September.

The type is in the British Museum.

C. immixta Grt.*

1880. Grt., Bull. Geol. Surv., VI, 259, *Agrotis*.

HABITAT.—Texas in May.

The specimens named *immixta* in the National Museum agree with the type in the British Museum; those named *immixta* in the Neumoegen collection are *balinitis*. The species probably belongs to another genus. The preceding species, except the last, are closely related, but I think distinct. The separation of the species in the Revision is in accord with the types, all of which I have now seen. The National Museum series is correctly arranged.

C. balinitis Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 97, pl. 3, f. 4, *Agrotis*.
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 169 = *messoria*.

HABITAT.—Colorado; British Columbia.

I have utterly mistaken this species, as appears by the type in the British Museum. Mr. Grote has always associated it with *messoria* and compared it with that species, so that I naturally sought an ally of *messoria* to which the description could be applied. Specimens fully agreeing with Mr. Grote's type have been labeled *inconcinna* by me in Mr. Neumoegen's collection.

C. terrealis Grt.

1882. Grt., Trans. Kans. Ac. Sci., VIII, 47, *Agrotis*.

HABITAT.—New Mexico.

Types are with Prof. Snow and Mr. Neumoegen.

Genus **RHIZAGROTIS** Smith.

1890. Smith, Bull. U. S. Nat. Mus., No. 38, 103.

R. abnormis Smith.*

1890. Smith, Trans. Am. Ent. Soc., XVII, 41, *Agrotis*.

HABITAT.—Sierra Nevada, California.

The types are in the National Museum and in the Henry Edwards collection.

R. proclivis Smith.

1887. Smith, Proc. U. S. Nat. Mus., X, 453, *Agrotis*.

HABITAT.—Arizona.

The types are in the Tepper and Neumoegen collections

R. acclivis Morr.

1875. Morr., Ann. Lyc. Nat. Hist., N. Y., XI, 93, *Agrotis*.
opaca Harv.
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 72, pl. 3, f. 1, *Agrotis*.
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 106, pr. syn.

HABITAT.—New York(?); Arizona; Texas; Colorada in May.

Dr. Harvey's type is in the British Museum and proves the correctness of my reference. The type of Mr. Morrison's species is in the Tepper collection.

R. albicosta Smith.*

1887. Smith, Proc. U. S. Nat. Mus., x, 451, *Agrotis*.

HABITAT.—New Mexico; Arizona; Colorado, foothills.

The types are with Mr. Neumoegen and Mr. Graef. Others are in the National Museum.

R. apicalis Grt.

1880. Grt., Bull. Geol. Surv., VI, 153, *Agrotis*.

HABITAT.—Colorado; New Mexico.

The species does not seem to be represented in the British Museum. The type is with Mr. Neumoegen.

R. lagena Grt.*

1875. Grt., Can. Ent., VII, 26, *Agrotis*.

HABITAT.—Arizona; Montana; Utah; Nevada; California; Colorado.

The type is in the British Museum

R. albalis Grt.*

1878. Grt., Bull. Geol. Surv., IV, 175, *Agrotis*.
var. **cloanthoides** Grt.*
1880. Grt., Bull. Geol. Surv., VI, 153, *Agrotis*.
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 108, pr. syn.

HABITAT.—Nevada; Colorado.

A specimen marked *albalis* type is in the British Museum, and another is in the Bailey collection. The two are not alike. The specimen in the British Museum collection has a very clear, bright, bluish white ground, while that in the Bailey collection has a more sordid appearance and is really a rather shabby specimen of *cloanthoides*, of which Mr. Graef has the type. I have recently received a Colorado specimen exactly like the type of *albalis*, and now consider it a good variety at least. A similar specimen is in the National Museum, labeled by Mr. Grote.

Genus **FELTIA** Wlk.

1856. Wlk., C. B. Mus., Het., IX, 203.

F. olivia Morr.

1876. Morr., Proc. Bost. Soc. N. H., XVIII, 238, *Agrotis*.

HABITAT.—Utah.

The type is in the Tepper collection.

F. longidens Smith.*

1890. Smith, Bull. U. S. Nat. Mus., No. 38, 217, *Feltia*.

HABITAT.—Las Vegas, New Mexico.

A type is with Mr. Neumoegen; another in the National Museum.

F. subgothica Haw.*

1810. Haw., Lep. Britt., 224, *Noctua*.
1829. Steph., Ill. Br. Ent., Haust., II, 126, pl. 22, f. 3, *Agrotis*.
1839. Wood, Index Ent., 36, pl. 9, f. 149, *Agrotis*.
1856. Fitch, 1st and 2d Rept. Ins. N. Y., 314, pl. 3, f. 1, *Agrotis*.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 99, *Agrotis*.
1874. Lint., Ent. Cont., III, 161, *Agrotis*.
1882. Riley, Papilio, II, 44, *Agrotis*.
1883. Saund., Fruit Insects, 328, f. 329, *Agrotis*.
jaculifera var., Gn.
1852. Gn., Sp. Gen., Noct., I, 262, pl. V, f. 4, *Agrotis*.
1856. Wlk., C. B. Mus., Het., X, 327, *Agrotis*.
1869. Riley, 1st Rept. Ins. Mo., 82, pl. I, f. 11, *Agrotis*.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 99, pr. syn.
1881. Riley, Index and Suppl. to Mo. Repts., 52, pr. syn.
1882. Riley, Papilio, II, 44, *Agrotis*.
ducens Wlk.
1856. Wlk., C. B. Mus., Het., IX, 203, *Feltia*.
1868. G. & R., Trans. Am. Ent. Soc., II, 77, pr. syn.
1869. Beth., Can. Ent., I, 86, pr. syn.
1889. Butler, Trans. Ent. Soc. Lond., 377, pr. syn.
radiata Harr. Mss.
1891. Smith, List Lep. Bor. Am., 38, pr. syn.

HABITAT.—United States and Canada. Northern States, July to September; Colorado, August.

I have not seen Haworth's work. The figure given by Stephens is a very poor one if it refers to our species; which I am very decidedly inclined to doubt.

F. jaculifera Gn.*

1852. Gn., Sp. Gen., Noct., I, 262, *Agrotis*.
1869. Riley, 1st Rept. Ins. Mo., 82, f. 29 *b*, *Agrotis*.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 99=*subgothica*.
1881. Riley, Index and Suppl. to Mo. Repts., 55=*tricosa*.
subgothica ‡ Pack.
1869. Pack., Guide, 306, f. 238, right-hand figure.
1883. Saund., Fruit Insects, 328, f. 329, right-hand figure.
tricosa Lint.
1874. Lint., Ent. Cont., III, 159, *Agrotis*.
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 5, *Agrotis*.
1882. Riley, Papilio, II, 44, an var. *subgothica*.
1883. Grt., Trans. Am. Phil. Soc., XXI, 156, an sp. dist.?
1889. Butler, Trans. Ent. Soc. Lond., 377, pr. syn.

HABITAT.—United States, east of Rocky Mountains; Colorado; Canada. Northern States, July to September; Texas, October.

F. herilis Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 99, *Agrotis.*
1874. Lint., Ent. Cont., III, 160, *Agrotis.*
1882. Riley, Papilio, II, 44=*subgothica* var.
1883. Grt., Proc. Am. Phil. Soc., XXI, 156, an sp. dist.
jaculifera var. B., Gn.
1852. Gn., Sp. Gen., Noct., I, 262, *Agrotis.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 99, pr. syn.

HABITAT.—United States, east of Rocky Mountains; Canada; British Columbia. Northern States, July to September.

The three species last given are represented in the British Museum by good series, and the separation is in accord with my identifications in the National Museum. The types of *ducens* Wlk., *jaculifera* Gn., and *herilis* Grt., are in the English collection, that of *radiata* Harris, is in the collection of the Boston Society of Natural History, and that of *tricosa* is in Dr. Lintner's collection.

F. pectinicornis Smith.*

1890. Smith, Bull. U. S. Nat. Mus., No. 38, 114, *Feltia.*

HABITAT.—Texas, March and October.

The types are in the U. S. National Museum.

F. evanidalis Grt.

1878. Grt., Bull. Geol. Surv., IV, 172, *Agrotis.*

HABITAT.—California.

The type in the British Museum is a good species, which I had not before seen. The antennæ are shortly pectinated, much as in the preceding, from which, however, it differs by greater size and brighter colors, which are more nearly like *subgothica* than any other.

F. circumdata Grt.

1883. Grt., Ann. & Mag. Nat. Hist., 1883, 53, *Agrotis.*
1883. Grt., Trans. Kans. Ac. Sci., VIII, 54, *Agrotis.*

HABITAT.—New Mexico.

I do not know where the type is at present.

F. gladiaria Morr.*

1874. Morr., Proc. Bost. Soc. N. H., XVII, 162, *Agrotis.*
1875. Morr., Proc. Acad. Nat. Sci. Phil., 1875, 59, *Agrotis.*
1880. Grt., Bull. Geol. Surv., VI, 163, *Agrotis.*
morrisoniana Riley.
1874. Riley, Proc. Bost. Soc. N. H., XVII, 286, *Agrotis.*
1874. Morr., Proc. Bost. Soc. N. H., XVII, 214, *Agrotis.*

HABITAT.—United States, east of Rocky Mountains; Northern States in September; Texas in October.

Mr. Morrison's type is in the Tepper collection; that of Dr. Riley is in the National Museum. In the British Museum is a specimen labeled *morrisoniana* "type," in Mr. Grote's handwriting. It is correctly determined and came from Dr. Riley.

F. venerabilis Wlk.*

1856. Wlk., C. B. Mus., Het., x, 328. *Agrotis.*

HABITAT.—Canada; United States generally; New York in September; Texas in November; California and Colorado in October.

The type is in the British Museum. Messrs. Grote and Robinson in 1869 and Mr. Butler in 1889 referred *Agrotis incallida* Wlk., as a synonym of the above. The type is a badly rubbed specimen; but it is undoubtedly *Hadena* (*Luperina*) *passer* Gn., and not an *Agrotis* at all.

F. gravis Grt.*

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 155, *Agrotis.*
1875. Grt., Can. Ent., VII, 25, *Agrotis.*
rapularis Grt.
1876. Grt., Bull. Buff. Soc. Nat. Sci., III, 81, *Agrotis.*
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 118, pr. syn.

HABITAT.—California.

Types of Mr. Grote's species are in the British Museum and confirm the above synonymy.

F. vancouverensis Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 134, pl. 4, f. 4, *Agrotis.*
agilis Grt.
1888. Grt., Can. Ent., XX, 128, *Agrotis.*
hortulana Morr.
1875. Morr., Proc. Acad. Nat. Sci. Phil., 1875, 430, *Agrotis.*
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 118, pr. syn.
semiclarata Grt.
1881. Grt., Can. Ent., XIII, 132, *Agrotis.*
1882. Grt., Ill. Essay, 52, pl. I, f. 9, *Agrotis.*
1889. Butler, Trans. Ent. Soc. Lond., 378, pr. syn.

HABITAT.—Vancouver; California in June; Colorado; Washington; Utah; Portland, Oregon, May and June.

The types of Mr. Grote's *vancouverensis* and *semiclarata* are in the British Museum, and refer to the same species. Mr. Morrison's type has been examined by me, but I have no memorandum as to its location. I think it is in the Cambridge Museum. The type of *agilis* is with Mr. Fletcher and does not refer to a distinct species. A specimen of *vancouverensis* marked type is also in the Hy. Edwards collection.

F. æneipennis Grt.*

1876. Grt., Bull. Buff. Soc. Nat. Sci., III, 81, *Agrotis.*
clodiana Grt.
1881. Grt., Papilio, I, 76, *Agrotis.*
1882. Grt., Ill. Essay, 52, pl. I, f. 10, *Agrotis.*
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 118, = *vancouverensis.*

HABITAT.—With *vancouverensis.* Alameda County, California, in May and June.

Types of both names are in the British Museum. I had referred *clodiana* to *vancouverensis* on the faith of specimens agreeing with Mr.

Grote's figure in the illustrated essay. This is utterly incorrect in color, and not at all a fair representation of the species, which does not differ from *æneipennis.* I would not be very greatly surprised if *vancouverensis* and *æneipennis* should prove forms of one very variable species.

F. volubilis Harv.*

1874. Harv., Bull. Buff. Soc. Nat. Sci., II, 118, *Agrotis.*
stigmosa Morr.
1874. Morr., Proc. Bost. Soc. N. H., XVII, 163, *Agrotis.*
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 121, pr. syn.

HABITAT.—United States and Canada; Northern and Eastern States in June and September; California in June ; Portland, Oregon, May and June.

These two species are kept separated in the British Museum, extreme forms only being represented. Neither of the specimens seems to be a type. I do not know where Dr. Harvey's type is. Types of Mr. Morrison's species are in the Tepper and Neumoegen collections.

F. annexa Tr.*

1825. Tr., Schmett. Eur., V. 154, *Agrotis.*
1829. Steph., Ill. Br. Ent. Haust., II, 117, pl. 22, f. 2, *Agrotis.*
1856. Wlk., C. B. Mus., Het., X, 328, *Agrotis.*
1852. Gn., Sp. Gen., Noct., I, 268, *Agrotis.*
1882. French, Can. Ent., XIV, 207, life history.
1889. Butler, Trans. Ent. Soc. Lond., 1889, 378, *Agrotis.*
decernens Wlk.
1856. Wlk., C. B. Mus., Het., X, 333, *Agrotis.*
1889. Butler, Trans. Ent. Soc. Lond., 1889. 378, *Agrotis.*

HABITAT.—Massachusetts in September; New York, July and August; south and west to Florida; Texas, March and December; California in October; South America.

The type of Walker's species is in the British Museum. Mr. Butler also cites *anteposita* Gn., Noct., I, 278, as a synonym, and perhaps correctly so. I have not seen a typical example, and as the species is described from South America, deemed it of insufficient importance to warrant much search. There is a considerable South and Central American bibliography to this species which it is not necessary to give here.

F. malefida Gn.*

1852. Gn., Sp. Gen., Noct., I, 267, *Agrotis.*
1856. Wlk., C. B. Mus., Het., X, 328, *Agrotis.*
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 5, *Agrotis.*

HABITAT.—Long Island, New York; New Jersey; south and west to Cuba and California; Florida in March; Texas, November and December.

The type is in the British Museum and proves the species correctly named in American collections.

Genus **POROSAGROTIS** Smith.

1890. Smith, Bull. U. S. Nat. Mus., No. 38, 123.

P. vetusta Wlk.*

1856. Wlk., C. B. Mus., Het., IX, 78, *Mythimna.*
1882. Grt., Ill. Essay, 41, ? = *muræmula.*
muræmula G. & R.
1868. G. & R., Trans. Am. Ent. Soc., I, 352, *Agrotis.*
1869. Beth., Can. Ent., I, 86, *Agrotis.*
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 73, pl. 3, f. 3, *Agrotis.*

HABITAT.—Canada; United States, west to Colorado, south to Georgia; New York, July and August; Massachusetts, August and September.

Walker's type is without question this well-known species of Grote & Robinson. The type of the latter authors is in the collection of the American Entomological Society labeled by Mr. Grote, though not marked "type."

P. catenula Grt.*

1879. Grt., No. Am. Ent., I, 44, *Agrotis.*

HABITAT.—Colorado, Glenwood Springs, October, Denver in June; Montana; New Mexico; California, in October.

The type is in the British Museum.

P. obesula Smith.*

1887. Smith, Proc. U. S. Nat. Mus., X, 456, *Agrotis.*

HABITAT.—Montana; Colorado.

The type is in the National Museum.

P. satiens Smith.*

1890. Smith, Trans. Am. Ent. Soc., XVII, 45, *Agrotis.*

HABITAT.—Northwest British Columbia; Colorado.

The types are with Mr. Neumœgen, and in the Coll. U. S. National Museum.

P. mimallonis Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 98, *Agrotis.*
1878. Grt., Bull. Geol. Surv., IV, 175, *Agrotis.*
rufipennis Grt.
1875. Grt., Can. Ent., VII, 83, *Agrotis.*
1875. Grt., Can. Ent., VII, 226, pr. syn.

HABITAT.—Montana; Colorado; New York, in August; Canada.

The type of *rufipennis* is in the British Museum. *Mimallonis* was described from the Meade collection.

P. fusca Bdv.

1834. Bdv., Ic. Hist. de. Lepid., pl. 48, f. 4, *Agrotis*.
1864. Mœschl., Wien. Ent. Monatschr., VI, 197, *Agrotis*.
♂ *septentrionalis* Moeschl.
1862. Mœschl., Wien. Ent. Monatschr., IV, 133, pl. I, f. 3, *Agrotis*.
1870. Mœschl., Stett. Ent. Zeit., XXXI, 268, pr. syn.
patula Wlk.
1856. Wlk., C. B. Mus., Het., X, 329, *Agrotis*.

HABITAT.—Labrador; Rocky Mountains.

Walker's type is in the British Museum, and agrees fully with specimens of *septentrionalis* sent me by Mœschler as typical, years ago. I have never before seen it from the Rocky Mountains, and there is a margin of possibility that larger material will develop points of difference that I do not find now.

P. tripars Wlk.*

1856. Wlk., C. B. Mus., Het., IX, 78, *Mythimna*.
1882. Grt., Ill. Essay, 41, ? an *Agrotis*.
worthingtoni Grt.
1880. Grt., No. Am. Ent., I, 91, *Agrotis*.

HABITAT.—New York; Indiana.

The types of both names are in the British Museum. The species is a familiar one to me; but I had, following Mr. Morrison, doubtfully identified it with *Eucoptocnemis fimbriaris* Gn., than which it is narrower winged with almost the same maculation. Its association with the species of this genus is probably correct; but I have had no opportunity to examine a male critically. I have a specimen compared with the type. The National Museum specimens are under the name *Eucoptocnemis fimbriaris*, labeled by Mr. Morrison.

P. rileyana Morr.*

1874. Morr., Proc. Bost. Soc. N. H., XVII, 166, *Agrotis*.
1875. Morr., Proc. Acad. Nat. Sci. Phil., 58, *Agrotis*.

HABITAT.—New York; Illinois; Missouri; Kansas; New Mexico; Colorado; Texas.

A specimen marked "type" is in the British Museum; others are in the National Museum and in the Tepper and other collections, all referring to the same species. Mr. Morrison was very liberal in marking types of this species.

P. texana Grt.

1863. Grt., Proc. Ent. Soc. Phil., II, 273, pl. VI, f. 2, *Agrotis texanus*.
1881. Grt., Papilio, I, 127, 153, ?=*segetum*.
1883. Grt., Papilio, III, 76, an sp. dist.
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 154, *Carneades*.

HABITAT.—Texas.

The types, ♂ and ♀, are in the collection of the American Entomological Society. In the British Museum is a specimen labeled *texana* by

Mr. Grote, which is not the same species. The insect is from Tucson, Ariz., and is from Mr. Neumœgen's collection. In that collection are other specimens also labeled *texana* and from them I drew the character for the species, in my revision. I had not been able at that time to find the type in the Philadelphia collection; but a recent systematic search discovered the specimens under a misleading label. Indeed, but for the fact that one of the specimens was obviously the original of the figure above cited, they could not have been identified with certainty at all. As it is, the type proves a *Porosagrotis* instead of a *Carneades*, and the insect I described in my revision lacks a name. The ♂ antennæ are pectinated, secondaries white in the male, only a little soiled in the female. The claviform is obvious. It is between *rileyi* and *orthogonia*, differing obviously from either. The types have no locality labels, and I have no information as to who collected them. It is possible that it may prove more nearly related to my *obesula* than I now believe, when abundant material is at hand.

P. orthogonia Morr.*

1876. Morr., Proc. Bost. Soc. N. H., XVIII, 239, *Agrotis.*

HABITAT.—Colorado; New Mexico; Nebraska; Arizona; Utah.
I have not seen the type.

P. dædalus Smith.*

1890. Smith, Bull. U. S. Nat. Mus., No. 38, 217, *Porosagrotis.*

HABITAT.—Colorado.
Types are in the National Museum.

P. dollii Grt.

1882. Grt., Can. Ent., XIV, 216, *Agrotis.*

HABITAT.—Arizona.
The types are with Mr. Neumoegen.

P. milleri Grt.*

1875. Grt., Bull. Buff. Soc. Nat. Sci., III, 78, pl. 4, f. 4, *Agrotis.*

HABITAT.—Sierra Nevada, California.
The type is in the Edwards collection.

P. pluralis Grt.*

1878. Grt., Bull. Geol. Surv., IV, 174, *Agrotis.*
1880. Grt., Bull. Geol. Surv., VI, 144, *Agrotis.*
1882. Grt., Ill. Essay, 55, pl. 2, f. 16, *Agrotis.*

HABITAT.—Nevada; Colorado.
A specimen marked "type" is in the British Museum; another, marked in the same way, is in the Bailey collection.

Genus **CARNEADES** Grt.

1883. Grt., Can. Ent., XV, 4.

C. wilsonii Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 135, pl. 4, f. 3, *Agrotis.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 62, *Agrotis.*
specialis Grt.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 62, *Agrotis.*
1882. Grt., Ill. Essay, 54, pl. 2, f. 14, *Agrotis.*
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 133, pr. syn.
æqualis Harv.
1876. Harv., Can. Ent., VIII, 36, *Agrotis.*

HABITAT.—California, August and September; Glenwood Springs, Colorado, September.

Types of each of the above names are in the British Museum. *Specialis* is simply a color variety of *wilsonii*, between which every intermediate form exists. The type of *æqualis* is a rubbed and somewhat imperfect specimen, with the markings consequently less defined. The species is an excessively variable one. A "type" of *wilsonii* is also to be found in the Museum of Comparative Zoölogy, Cambridge.

C. lacunosa Grt.*

1878. Grt., Bull. Geol. Surv., IV, 172, *Agrotis.*

HABITAT.—California.

Mr. Grote says the type is in the collection of the Buffalo Society of Natural Science. A specimen labeled by Mr. Grote is in the British Museum.

C. recula Harv.*

1876. Harv., Can. Ent., VIII, 37, *Agrotis.*

HABITAT.—Oregon; Colorado.

A type specimen is in the British Museum; others are in the Edwards collection.

C. cicatricosa G. and R.*

1865. G. and R., Proc. Ent. Soc. Phil., IV, 492, pl. 3, f. 4, *Agrotis.*

HABITAT.—Colorado.

A specimen named by Mr. Grote is in the British Museum; the type is in the collection of the American Entomological Society.

C. neomexicana Smith.*

1890. Smith, Bull. U. S. Nat. Mus., No. 38, 218, *Carneades.*

HABITAT.—New Mexico.

Types are in the National Museum and the collections of Neumoegen and Hulst, the latter now at Rutgers College.

C. quadridentata G. and R.*

1865. G. and R., Proc. Ent. Soc. Phil., IV, 491, pl. 3, ff. 2 and 3, *Agrotis*.

HABITAT.—Colorado; Oregon.

A specimen named by Mr. Grote is in the British Museum; the type is in the collection of the American Entomological Society.

C. niveilinea Grt.*

1882. Grt., Can. Ent., XIV, 216, *Agrotis*.

HABITAT.—Arizona; New Mexico; Colorado; Nebraska; Texas in October.

Types are in the National Museum and in Mr. Neumoegen's collection.

C. insertans Smith.

1890. Smith, Trans. Am. Ent. Soc., XVII, 45, *Agrotis*.

HABITAT.—Spencer's Bridge, British Columbia.

The type is in Mr. Neumoegen's collection.

C. brevipennis Smith.*

1887. Smith, Proc. U. S. Nat. Mus., X, 455, *Agrotis*.

HABITAT.—California; Nevada; Colorado in September.

Types are in the National Museum collection and with Mr. Neumoegen.

C. oblongostigma Smith.*

1887. Smith, Proc. U. S. Nat. Mus., X, 454, *Agrotis*.

HABITAT.—Montana; Black Hills; Colorado, Glenwood Springs, August.

Type specimens are in the National Museum, and in the collections of Graef, Neumoegen, and Hulst.

C. plagigera Morr.*

1874. Morr., Proc. Bost. Soc. N. H., XVII, 163, *Agrotis*.
1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 57, *Agrotis*.

HABITAT.—Colorado, Glenwood Springs, August; Montana; Nevada; Kansas; Washington; Illinois; New York.

Specimens, not types, are in the British Museum; the type is in the Tepper collection.

C. olivalis Grt.*

1879. Grt., No. Am. Ent., I, 43, *Agrotis*.

HABITAT.—Colorado; Utah.

The type is in the British Museum, and is like the specimens so named in the National collection.

C. ridingsiana Grt.*

1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 305, *Agrotis.*

HABITAT.—Colorado, in May; Arizona; New Mexica.

The type is in the British Museum.

C. flavidens Smith.*

1887. Smith, Proc. U. S. Nat. Mus., x, 455, *Agrotis.*

HABITAT.—Colorado, July; Arizona; New Mexico in August.

Types are in the National Museum, and in the collections of Graef and Neumoegen.

C. flavicollis Smith.*

1887. Smith, Proc. U. S. Nat. Mus., x, 456, *Agrotis.*

HABITAT.—Montana; Colorado; Arizona.

The type is in the Tepper collection.

C. bicollaris Grt.*

1878. Grt., Bull. Geol. Surv., IV, 173, 174, *Agrotis.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 155, *Agrotis.*

HABITAT.—California; Nevada; Arizona.

The type is in the Edwards collection; I found no specimens in the British Museum.

C. brocha Morr.*

1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 56, *Agrotis.*
bochus Morr.
1874. Morr., Proc. Bost. Soc. N. H., XVII, 163, *Agrotis.*

HABITAT.—Colorado, August to October; Nevada; Kansas; Nebraska.

This species is placed under *Agrotis furcifera* Wlk., in the British Museum collections, in my opinion erroneously. Mr. Walker has also described a specimen as *Agrotis transversa*, which is almost certainly the same as Morrison's species. There are, however, several forms from Central or South America that come very close, and as careful and critical study would be required to decide specific limitations, for which I had not the time, I prefer leaving the name as it is, simply calling attention to the probabilities, and to the necessity for further study.

C. sponsa Smith.*

1887. Smith, Proc. U. S. Nat. Mus., x, 457, *Agrotis.*

HABITAT.—Washington.

The type is in the National Museum.

C. cogitans Smith.*

1890. Smith, Trans. Am. Ent. Soc., XVII, 46, *Agrotis.*

HABITAT.—California; Colorado.

Types are in the National collection and with Mr. Neumoegen.

C. hollemani Grt.*

1874. Grt., Can. Ent., VI, 156, *Agrotis*.

HABITAT.—California; Arizona; Colorado, Glenwood Springs, August and September.

The specimen in the British Museum agrees with my identifications of the species, but is not the type. I have not seen the latter.

C. atristrigata Smith.

1890. Smith, Ent. Amer., VI, 76, *Agrotis*.
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 150, *Carneades*.

HABITAT.—Northwest British Columbia.

The type is with Mr. Neumoegen.

C. biclavis Grt.*

1879. Grt., Bull. Geol. Surv., V, 206, *Agrotis*.
1882. Grt., Ill. Essay, 53, pl. I, f. 12, *Agrotis*.

HABITAT.—Arizona.

The type is in the British Museum. It is a very distinct, brightly marked form and is correctly located in my revision.

C. perpolita Morr.*

1876. Morr., Proc. Bost. Soc. N. H., XVIII, 237, *Agrotis*.
1878. Lint., Ent. Cont., IV, 123, *Agrotis*.

HABITAT.—New York in August, and northward; Colorado, Glenwood Springs, August.

The type is in the Tepper collection.

C. fumalis Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 98, *Agrotis*.
1878. Grt., Bull. Geol. Surv., IV, 174, *Agrotis*.
permunda Morr.
1874. Morr., Proc. Bost. Soc. N. H., XVII, 163, *Agrotis*.
1880. Grt., Bull. Surv., VI, 151, pr. syn.

HABITAT.—Northern, Eastern, and Middle States; District of Columbia; Canada; Massachusetts in August.

A specimen labeled *permunda* is in the National Museum, from the Meske collection, and the British Museum specimen labeled *fumalis* by Mr. Grote, is the same. It is not the type.

C. perfusca Grt.

1883. Grt., Papilio, III, 77, *Agrotis*.

HABITAT.—California; Colorado; Arizona.

The type is with Mr. Graef.

C. punctigera Wlk.*

1865. Wlk., C. B. Mus., Het., XXXII, 661, *Mamestra.*
1891. Smith, Proc. U. S. Nat. Mus., XIV, 273, *Mamestra.*
pastoralis Grt.
1875. Grt., Can. Ent., VII, 68, *Agrotis.*

HABITAT.—Vancouver; Washington; Nevada; Colorado; Arizona; New Mexico; Northwest British Columbia.

The types of both names are in the British Museum, and refer to the same species. This species is variable; but both *punctigera* and *pastoralis* were applied to the same form of it.

C. finis Smith.*

1887. Smith, Proc. U. S. Nat. Mus., x, 457, *Agrotis.*

HABITAT.—Black Hills; Montana.

The type is in the National Museum.

C. velleripennis Grt.*

1874. Grt., 6th Rept. Peab. Ac. Sci., App. 25, *Agrotis.*

HABITAT.—Canada; Eastern and Middle States, west to the Rocky Mountains; Colorado; Massachusetts and Illinois, in August; New York, in September.

C. atomaris Smith.*

1890. Smith, Trans. Am. Ent. Soc., XVII, 47, *Agrotis.*

HABITAT.—California, in September; Colorado, Glenwood Springs, September.

Types are in the National Museum and in the Neumœgen collection.

C. gagates Grt.*

1875. Grt., Can. Ent., VII, 68, *Agrotis.*
1880. Grt., Bull. U. S. Geol. Surv., VI, 162, *Agrotis.*

HABITAT.—Colorado, Glenwood Springs, August to October; California, in September.

The type is in the British Museum.

C. citricolor Grt.*

1880. Grt., Can. Ent., XII, 151, *Agrotis.*
1880. Grt., Bull. Geol. Surv., VI, 160, *Agrotis.*
1883. Grt., Can. Ent., XV, 26, *Carneades.*

HABITAT.—Colorado; Utah; Arizona; New Mexico.

The type is in the British Museum.

C. misturata Morr., MSS.

1890, Smith, Bull. U. S. Nat. Mus., No. 38, 156, *Carneades.*

HABITAT.—Colorado, Glenwood Springs, September.

The types are in the Tepper and Neumœgen collections.

C. moerens Grt.

1883. Grt., Can. Ent., xv, 4, *Carneades*.
1883. Grt., Papilio, III, 30, *Carneades*.

HABITAT.—Arizona.

The type is in Mr. Neumœgen's collection.

C. dolis Grt.

1880. Grt., No. Am. Ent., I, 91, *Agrotis*.
1889. Butler, Trans. Ent. Soc. Lond., 1889, 381,=*Chera birivia*.

HABITAT.—Colorado.

The type is in the Graef collection. A specimen in the British Museum is somewhat more maculate; but seems to be the same. Mr. Butler refers it to *Chera birivia*, Hbn., and I can not myself find any obvious differences between them. *Birivia* is an alpine species, and I am not ready to believe, without the most critical comparison, that the two are identical, though superficially they seem alike. I have therefore retained Mr. Grote's name for the present. If *Chera* has as type this species, it will have to replace *Carneades*. Mr. Grote's specimen has no locality.

C. scandens Riley.*

1869. Riley, 1st Rept. Ins. Mo., 76, pl. I, f. 5, 7, *Agrotis*.
1874. Riley, 6th Rept. Ins. Mo., 6, *Agrotis*.
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 306,=*murænula*.
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 73, pl. 3, f. 4, an sp. dist.
1881. Riley, Ind. et Suppl. to Mo. Repts., 75, *Agrotis*.
1881. Grt., Papilio, I, 127,=*messoria?*
1882. Riley, Papilio, II, 43, an sp. dist.
1883. Saund., Fruit Insects, 107, f. 105, *Agrotis*.

HABITAT.—East of Rocky Mountains; Colorado; Northern States in June.

The type is in the National Museum. A correctly named specimen from the Grote collection is in the British Museum, and I can not understand how Mr. Grote ever saw any resemblance to either *murænula* or *messoria*.

C. detesta Smith.

choris ‡ Smith.
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 158, *Carneades*.

HABITAT.—Colorado.

I have mistaken Dr. Harvey's species, as appears by the type in the British Museum, and I propose the name *detesta* for the species I have described in my revision under the term *choris*.

C. remota Smith.

1890. Smith, Trans. Am. Ent. Soc., XVII, 48, *Agrotis*.

HABITAT.—Sierra Nevada, California; Colorado.

The type is in the Edwards collection.

C. detersa Wlk.*

1856. Wlk., C. B. Mus., Het., IX, 212, ? *Charæas.*
pitychrous Grt.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 82, *Agrotis.*
1889. Beutenmuller, Ent. Amer., V, 38, larva.
personata Morr.
1876. Morr., Proc. Bost. Soc. N. H., XVIII, 238.
1880. Grt., Can. Ent., XII, 187, pr. syn.

HABITAT.—Nova Scotia; Canada; Northern, Eastern, Middle, and Central States; Colorado, Glenwood Springs, September; Northern States, July, August, and September.

Walker's type in the British Museum is like an average *pitychrous*, such as is also in the collection from the Grote material. The type of *personata* is in the Tepper collection, and is a small fully marked specimen, such as is occasionally found throughout the range of the species. The type of *pitychrous* is with Dr. Lintner.

C. infracta Morr.

1875. Morr., Proc. Bost. Soc. N. H., XVIII, 115, *Agrotis.*

HABITAT.—Colorado; Texas.

The type is in the Tepper collection.

C. luteola Smith.*

1887. Smith, Proc. U. S. Nat. Mus., X, 457, *Agrotis.*

HABITAT.—Arizona.

The type is in Mr. Neumoegen's collection.

C. serricornis Smith.

1887. Smith, Proc. U. S. Nat. Mus., X, 458, *Agrotis.*

HABITAT.—Southern California.

The type is in the Tepper collection.

C. tetrica Smith.

1887. Smith, Proc. U. S. Nat. Mus., X, 458, *Agrotis.*

HABITAT.—Texas; Nevada.

Types are in the Bailey collection.

C. bostoniensis Grt.*

1874. Grt., Proc. Ac. Nat. Sci. Phil., 1874, 203, *Agrotis.*
1876. Harv., Bull. Buff. Soc. Nat. Sci., III, 74, pl. 3, f. 7, *Agrotis.*

HABITAT.—Middle, Eastern, and Northern States; Canada; Massachusetts in September; New York in October.

The type is in the British Museum.

C. cænis Grt.*

1879. Grt., No. Am. Ent., I, 44, *Agrotis.*
muscosa Grt.
1883. Grt., Can. Ent., XV, 26, *Agrotis.*
1887. Smith, Proc. U. S. Nat. Mus., X, 460, pr. syn.

HABITAT.—Colorado, Glenwood Springs, August to October; New Mexico.

The type of *cœnis* is in the British, that of *muscosa* in the U. S. National Museum. The two are of the same species. A type of *cœnis* is also in the Neumoegen collection.

C. medialis Smith.*

1887. Smith, Proc. U. S. Nat. Mus., x, 459, *Agrotis.*

HABITAT.—Texas, October and November; Colorado.

The types are in the National Museum.

C. feniseca Harv.*

1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 74, pl. 3, f. 6, *Agrotis.*
1875. Grt., List Noctuidæ, 25, *Agrotis.*

HABITAT.—California.

The type is in the British Museum.

C. extranea Smith.

1887. Smith, Proc. U. S. Nat. Mus., x, 459, *Agrotis.*

HABITAT.—Montana.

The type is in the Tepper collection.

C. trifasciata Smith.

1887. Smith, Proc. U. S. Nat. Mus., x, 460, *Agrotis.*

HABITAT.—Mount Hood, Oregon.

The types are in the Tepper and Graef collections.

C. bifasciata Smith.*

1887. Smith, Proc. U. S. Nat. Mus., x, 460, *Agrotis.*

HABITAT.—Arizona.

The type is in the National Museum.

C. comosa Morr.

1876. Morr., Proc. Bost. Soc. N. H., XVIII, 238, *Agrotis.*

HABITAT.—Colorado.

The type is in the Tepper collection. A specimen labeled *comosa* by Mr. Grote, is in the British Museum, and is not like the type. It is nearer to my *incallida*, from which it differs obviously, and is probably undescribed.

C. sculptilis Harv.*

1874. Harv., Bull. Buff. Soc. Nat. Sci., II, 271, *Agrotis.*
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 73, pl. 3, f. 2, *Agrotis.*
1882. Grt., New List Lepid., *Ammaconia.*
1887. Grt., Can. Ent., XIX, 44, *Rick'a.*
xyliniformis Smith.
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 221, *Carneades.*

HABITAT.—Texas, in October; New Mexico.

Dr. Harvey's type is in the British Museum, and is like the type of *xyliniformis* in the National Museum. Dr. Harvey's figure is poor and does not suggest this species at all. Mr. Grote's reference of the species to *Ammaconia* prevented all chance of my recognizing it. It has nothing at all in common with the other species referred to that genus.

C. messoria Harr.*

1841. Harr., Rept. Ins. Mass., *Agrotis.*
1862. Harr., Inj. Ins., Flint ed., 444, *Agrotis.*
1885. Riley, Ent. Amer., I, 176, *Agrotis.*
spissa Gn.
1852. Gn., Sp. Gen., Noct., I, 261, *Agrotis.*
1856. Wlk., C. B. Mus., Het., X, 327, *Agrotis.*
1877. Grt., Can. Ent., IX, 28, pr. syn.
1880. Grt., Bull. Geol. Surv., VI, 566, *Agrotis.*
1889. Butler, Trans. Ent. Soc. Lond., 379, pr. syn.
lycarum ‡ Grt.
1874. Grt., Can. Ent., VI, 155, *Agrotis.*
cochrani Riley.
1868. Riley, Prairie Farmer, July, 1868, *Agrotis.*
1869. Riley, 1st. Rept. Ins. Mo., 75, *Agrotis.*
1874. Grt., Can. Ent., VI, 214, pr. syn.
1881. Riley, Index and Supplt. to Mo. Repts., 76, pr. syn.
1881. Grt., Papilio, I, 126, pr. syn.
1882. Riley, Papilio, II, 41, *Agrotis.*
1883. Saund., Fruit Insects, 107, f. 101, *Agrotis.*
repentis G. & R.
1868. G. & R., Trans. Am. Ent. Soc., I, 350, pl. 7, f. 58, *Agrotis.*
1873. Grt., Bull. Buff. Soc., Nat. Sci., I, 96, *Agrotis.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 53 = *cochrani.*
1881. Grt., Papilio, I, 126 = *messoria.*
confracta Morr. Mss.
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 169, pr. syn.
displiciens Wlk.
1865. Wlk., C. B. Mus., Het., XXXII, 660, *Mamestra.*
1891. Smith, Can. Ent., XXIII, 119, pr. syn.
reticens Wlk.
1865. Wlk., C. B. Mus., Het., XXXII, 692, *Agrotis.*
1891. Smith, Can. Ent., XXIII, 119, pr. syn.
ordinata Wlk.
1865. Wlk., C. B. Mus., Het., XXXII, 691, *Agrotis.*
1891. Smith, Can. Ent., XXIII, 119, pr. syn.
inextricata Wlk.
1865. Wlk., C. B. Mus., Het., XXXII, 658, *Mamestra.*
1891. Smith, Can. Ent., XXIII, 120, pr. syn.
indirecta Wlk.
1865. Wlk., C. B. Mus., Het., XXXII, 659, *Mamestra.*
1891. Smith, Can. Ent., XXIII, 120, pr. syn.
septentrionalis Wlk.
1865. Wlk., C. B. Mus., Het., XXXII, 660, *Mamestra.*
1891. Smith, Proc. U. S. Nat. Mus., XIV, 272, *Mamestra.*
inducta Wlk.
1857. Wlk., C. B. Mus., Het., X. 236, *Mamestra.*

HABITAT.—United States and Canada. Canada, June, July, and September; New York, Illinois, August and September; California, in September; Colorado, Glenwood Springs, August, September.

Harris's type is in the Boston Society of Natural History, where I have seen it. *Spissa* Gn., as determined by Walker, is the same species; but the type is not in the British Museum. Walker found this species a veritable silver mine, seven hard shillings being its value to him, and as many of his types are in the Museum. Dr. Riley's type is in the National Museum. Mr. Morrison's is in the Tepper collection. The type of *repentis* is to be found in the collection of the American Entomological Society. *Inducta* was described from Venezuela, giving this species a very wide range.

C. pleuritica Grt.*

1875. Grt., Check List, 1875, 47, *Agrotis*.

HABITAT.—Canada; Maine; New Hampshire; northern New York.

The type is in the British Museum.

C. drewseni Stgr.

1857. Stgr., Stett. Ent. Zeit., 1857, 302, *Agrotis*.

HABITAT.—Greenland.

The types, male and female, are in the Berlin Museum, and belong nearest to *pleuritica* in appearance. The wings are narrow, elongate in the specimen, and of a rather pale gray. I have seen something very like this from Colorado; but it is probably a different species.

C. choris Harv.

1876. Harv., Can. Ent., VIII, 37, *Agrotis*.
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 158, *Carneades*.

HABITAT.—Nevada.

The type is in the British Museum. I had misidentified this species in my revision, and placed it next to *scandens*. It looks like a *messoria* with the lines almost obliterate and with white secondaries. The orbicular is oval, black-ringed; the reniform incomplete. The median shade line is obscure.

C. perturbata Smith.*

1890. Smith, Bull. U. S. Nat. Mus., No. 38, 222, *Carneades*.

HABITAT.—Colorado.

The type is in the National Museum.

C. rubefactalis Grt.*

1880. Grt., Bull. Geol. Surv., VI, 154, *Agrotis*.

HABITAT.—Washington; Colorado.

The type is in the British Museum.

C. fauna Morr.

1876. Morr., Proc. Bost. Soc. N. H., XVIII, 237, *Agrotis*.

HABITAT.—California.

The type, a miserable specimen, is in the Tepper collection.

C. brunneigera Grt.*

1875. Grt., Bull. Buff. Soc. Nat. Sci., III, 80, *Agrotis*.
1880. Grt., Bull. Geol. Surv., VI, 260, *Agrotis*.

HABITAT.—California in September; Washington; Vancouver; Colorado; Louisiana.

The type is in the Edwards collection. Another, also marked "type," is in the British Museum.

C. conjuncta Smith.

1890. Smith, Bull. U. S. Nat. Mus., No. 38, 221, *Carneades*.

HABITAT.—Las Vegas, New Mexico; Colorado.

The type is in Mr. Neumœgen's collection.

C. incallida Smith.

1890. Smith, Trans. Am. Ent. Soc., XVII, 50, *Agrotis*.

HABITAT.—Sierra Nevada, California.

The type is in the Edwards collection.

C. lutulenta Smith.*

1890. Smith, Trans. Am. Ent. Soc., XVII, 50, *Agrotis*.

HABITAT.—Sierra Nevada, California; Placer County, in September; Colorado, Glenwood Springs, August to October.

Types are in the National Museum; others in collection Edwards and Rutgers College.

C. annulipes Smith.*

1890. Smith, Trans. Am. Ent. Soc., XVII, 48, *Agrotis*.

HABITAT.—Oregon.

The type is in the National Museum.

C. pedalis Smith.*

1890. Smith, Bull. U. S. Nat. Mus., No. 38, 220, *Carneades*.

HABITAT.—Colorado.

The type is in the National Museum.

C. lineifrons Smith.*

1890. Smith, Bull. U. S. Nat. Mus., No. 38, 219, *Carneades*.

HABITAT.—Colorado.

The type is in the National Museum.

C. teleboa Smith.

1890. Smith, Bull. U. S. Nat. Mus., No. 38, 219, *Carneades.*

HABITAT.—Las Vegas, New Mexico; Colorado.

The type is with Mr. Neumœgen.

C. murdocki Smith.*

1890. Smith, Trans. Am. Ent. Soc., XVII, 49, *Agrotis.*

HABITAT.—Utah, Fort Thornburgh; Northwest British Columbia; Oregon; Glenwood Springs, Colorado, in September.

A type is in the National Museum; another in Mr. Neumœgen's collection.

C. quinquelinea Smith.

1890. Smith, Trans. Am. Ent. Soc., XVII, 49, *Agrotis.*

HABITAT.—Sierra Nevada, California.

The type is in the Edwards collection.

C. friabilis Grt.*

1875. Grt., Can. Ent., VII, 187, pl. I, f. 5, *Agrotis.*

HABITAT.—New York; Maine; Canada in August; Colorado; California in June and August.

The type is in the British Museum. It is rather rubbed, and the resemblance to *bostoniensis*, mentioned by Mr. Grote, is more evident than I supposed possible from my material.

C. fuscigera Grt.*

1874. Grt., Can. Ent., VI, 155, *Agrotis.*

HABITAT.—California; Colorado, Glenwood Springs in September.

The type is in the British Museum.

C. orbicularis Smith.

1887. Smith, Proc. U. S. Nat. Mus., X, 460, *Agrotis.*

HABITAT.—Nevada.

The type is in the Tepper collection.

C. micronyx Grt.

1878. Grt., Bull. Geol. Surv., IV, 171, *Agrotis.*

HABITAT.—California.

The type is in the British Museum.

C. intrita Morr.*

1874. Morr., Proc. Bost. Soc. N. H., XVII, 161, *Agrotis.*
1875. Grt., Can. Ent., VII, 68, *Agrotis.*

HABITAT.—Vancouver; California; Arizona.

Specimens named by Mr. Grote are in the British Museum. I have no notes as to the location of the type.

C. mollis Wlk.

1856. Wlk., C. B. Mus., Het. x, 331, *Agrotis.*
fernaldi Morr.
1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 429, *Agrotis.*
1882. Grt., Ill. Essay, 53, pl. I, f. 11, *Agrotis.*

HABITAT.—Maine; St. Martins Falls, Albany River, Hudson Bay Territory; Colorado.

Walker's type is rather a small specimen; but is exactly like a specimen from the Grote collection, marked "type." Both are in the British Museum. I had previously seen the species in Mrs. Fernald's collection. I sincerely regret being compelled to make this reference. Mr. Neumœgen also has a "type" of Mr. Morrison's species. I was much interested to find a specimen of this species in the 1892 captures sent me by Mr. Bruce from Colorada.

C. opipara Morr.

1874. Morr., Proc. Bost. Soc. N. H., XVII, 165, *Agrotis.*
1875. Morr., Psyche, I, 12, *Agrotis.*
1875. Grt., Psyche, I, 77, 99 = *islandica.*
1875. Morr., Psyche, I, 85, an sp. dist., *islandica.*
1876. Grt., Stett. Ent. Zeit., XXXVI, 135 = *islandica.*
1885. Smith, Ent. Amer., I, 15, an sp. dist., *islandica.*
1885. Smith, Stett. Ent. Zeit., XLVI, 223, *Agrotis.*
labradoriensis Stgr.
1881. Stgr., Stett. Ent. Zeit., XLII, 419, *Agrotis.*
1883. Moeschl., Stett. Ent. Zeit., XLIV, 117, *Agrotis.*
1885. Smith, Stett. Ent. Zeit., XLVI, 223, pr. syn.
islandica ‡ Auct.
1876. Grt., Stett. Ent. Zeit., XXXVI, 135, *Agrotis.*
1878. Pack., Bull. Geol. Surv., IV, 555, pl. f. 10, *Agrotis.*
1883. Moeschl., Stett. Ent. Zeit., XLIV, 117, *Agrotis.*
1885. Smith, Stett. Ent. Zeit., XLVI, 223, pr. syn.

HABITAT.—Mount Washington, New Hampshire; Labrador.

The type, or a specimen so marked, is in the British Museum and agrees fully with specimens in American collections. In Staudinger's collection, at Dresden, I saw his types of *labradoriensis*, and they are undoubtedly the same as *opipara.* They are as unquestionably distinct from the true *islandica*, the type of which I had the chance of comparing with it.

C. tristicula Morr.

1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 429, *Agrotis.*

HABITAT.—Orono, Maine.

I have seen only one specimen, typical, though not the type from Mrs. Fernald's collection. The type is with Mr. Neumœgen.

C. munis Grt.*

1879. Grt., No. Am. Ent., I, 38, *Agrotis.*
sublatis Grt.
1880. Grt., No. Am. Ent., I, 91, *Agrotis.*
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 184, pr. syn.

HABITAT.—Colorado, Glenwood Springs in October; Nevada; New Mexico.

The type of *munis* is in the British Museum; that of *sublatis* is in the Hulst collection. They undoubtedly refer to the same species.

C. dissona Moeschl.

1860. Moeschl., Wien. Ent. Monatschr., IV. 365, pl. 9, f. 4, *Agrotis*.
1885. Smith, Ent. Amer., I, 14, *Agrotis*.
1885. Smith, Stett. Ent. Zeit., XLVI, 223, *Agrotis*.
rava ‡ Pack.
1868. Pack., Proc. Bost. Soc. N. H., XI, 38, *Agrotis*.
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 184, pr. syn.

HABITAT.—Labrador.

Mr. Moeschler was good enough to send me type specimens for study. In the Staudinger collection is quite a good series showing no small amount of variation. The tendency is all in the direction of *opipara*, from which it really differs only in lacking the black shades and lines.

C. vetusta Wlk.

1865. Wlk., C. B. Mus., Het., XXXII, 662, *Mamestra*.
1891. Smith, Proc. U. S. Nat. Mus., XIV, 274, *Mamestra*.
tetra Wlk.
1865. Wlk., C. B. Mus., Het., XXXIII, 768, *Lepipolys*.
euroides Grt.
1874. Grt., Proc. Ac. Nat. Sci. Phil., 1874, 202, *Agrotis*.
perpura Morr.
1874. Morr., Pr. Bost. Soc. N. H., XVII, 164, *Agrotis*.
1880. Grt., Bull. Geol. Surv., VI, 151 = *euroides*.

HABITAT.—California; Washington; Vancouver.

Types of the Walker and Grote species are in the British Museum. All the names refer to one form.

C. alticola Smith.*

1890. Smith, Trans. Am. Ent. Soc., XVII, 51, *Agrotis*.

HABITAT.—Sierra Nevada, California; Colorado.

Types are in the National Museum and in the Edwards collection.

infausta Wlk.*

1865. Wlk., C. B. Mus., Het., XXXIII, 729, *Hadena*.
rufula Smith.
1887. Smith, Proc. U. S. Nat. Mus., X, 461, *Agrotis*.

HABITAT.—Vancouver; New Mexico, 7,000 feet, in July; Colorado, Hall Valley in August.

The type of Walker's species is in the British Museum; of my own, specimens are in the National Museum and with Prof. Snow. There is, unfortunately, no doubt that the names refer to the one species.

C. basiflava Smith.*

1890. Smith, Trans. Am. Ent. Soc., XVII, 52, *Agrotis*.

HABITAT.—Northwest British Columbia; South Park, Colorado.

Types are in the National Museum and in the Neumœgen collection.

C. satis Harv.

1876. Harv., Can. Ent., VIII, 36, *Agrotis*.

HABITAT.—California; Nevada; Montana.

I have not found the type of this species. It was described out of the Edwards collection, and the specimens there named are probably as typical as can be asked.

C. rena Smith.*

1890. Smith, Trans. Am. Ent. Soc., XVII, 53, *Agrotis*.

HABITAT.—Sierra Nevada, Placer County, in September, California. Types are in the National Museum, and in the Edwards collection.

C. insulsa Wlk.*

1856. Wlk., C. B. Mus., Het., IX, 234, *Mamestra*.
1873. Grt., Bull. Buff. Soc. Nat. Sci., II, 15, *Hadena*.
1883. Grt., Ill. Essay, 43, *Agrotis*.
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 208, *Agrotis*.
insignata Wlk.
1856. Wlk., C. B. Mus., Het., X, 330, *Agrotis*.
1889. Butler, Trans. Ent. Soc. Lond., 1889, 379, *Agrotis*.
expulsa Wlk.
1865. Wlk., C. B. Mus., Het., XXXII, 661, *Mamestra*.
declarata Wlk.
1865. Wlk., C. B. Mus., Het., XXXIII, 663, *Mamestra*.
1882. Grt., Ill. Essay, 43, *Agrotis*.
1883. Grt., Proc. Am. Phil. Soc., XXI, 156, *Agrotis*.
1885. Saund., Can. Ent., XVII, 32, *Agrotis*.
1888. Butler, Trans. Ent. Soc. Lond., 1889, 379=*insignata*.
tritici ‡ Gn.
1852. Gn., Sp. Gen., Noct., I, 228, *Agrotis*.
1856. Wlk., C. B. Mus., Het., X, 321, *Agrotis*.
1889. Butler, Trans. Ent. Soc. Lond., 1889, 379=*insignata*.
decolor Morr.
1874. Morr., Proc. Bost. Soc. N. H., XVII, 162, *Agrotis*.
1875. Morr., Can. Ent., VII, 214, *Agrotis*.
1877. Morr., Bull. Buff. Soc. Nat. Sci., III, 212, *Agrotis*.
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 190=*insignata*.
campestris Grt.
1875. Grt., Can. Ent., VII, 118, pl. I, f. 6, *Agrotis*.
1875. Grt., Proc. Ac. Nat. Sci. Phil., 1875, 423, *Agrotis*.
1875. Morr., Can. Ent., VII, 214=*decolor*.
1875. Grt., Can. Ent., VII, 227=*decolor*.
1877. Grt., Bull. Geol. Surv., III, 118, *Agrotis*.
1878. Grt., Bull. Geol. Surv., IV, 175, *Agrotis*.
1889. Butler, Trans. Ent. Soc. Lond., 1889, 379=*insignata*.
var. **verticalis** Grt.*
1880. Grt., Bull. Bkln. Ent. Soc., III, 29, *Agrotis*.
1885. Smith, Can. Ent., XVII, 6=*declarata*.

HABITAT.—Nova Scotia; Canada; northern United States from Atlantic to Pacific; Massachusetts in June; Canada in July; New York in August; California in September.

The types of the Walker and Grote names are all in the British Museum and they refer to one species only. *Insulsa* is a somewhat evenly colored form, with the cell but slightly contrasting; otherwise there is no difference. *Decolor* Morr., of which I have also seen the type, is the form in which there is considerable contrast between the light and dark shades, while in type *campestris* the color is even and the median lines become more marked.

C. tessellata Harr.*

1845. Harr., Rept. Ins. Mass., *Agrotis*.
1860. Harr., Inj. Ins., Flint. ed., 445, *Agrotis*.
1877. Grt., Bull. Geol. Surv., III, 118, *Agrotis*.
1883. Saund., Fruit Insects, 328, f. 340, *Agrotis*.
maizi Fitch.
1856. Fitch, 2d Rept. Ins. N. Y., 313, *Agrotis*.
1865. Fitch, 9th Rept. Ins. N. Y., 237–249, pl. 4, f. 2 and 3, *Agrotis*.
1874. Grt., Can. Ent. VI, 118, pr. syn.
1878. Lint., Ent. Cont., IV, 122, pr. syn.
nigricans ‡ Riley.
1869. Riley, 1st Rept. Ins. Mo., 87, *Agrotis*.
atropurpurea Grt.
1877. Grt., Bull. Geol. Surv., III, 118, *Agrotis*.
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 192, pr. syn.

HABITAT.—United States; Canada in June and July; New York; Illinois, August and September; Colorado, Glenwood Springs, August to October.

Harris's type is in the Boston Society of Natural History. The type of Mr. Grote's species is in the British Museum, and is merely a small *tessellata*. It is a matter of the greatest surprise that Walker has not redescribed the species. I think he considered it a form of *tritici*.

C. albipennis Grt.*

1877. Grt., Bull. Buff. Soc. Nat. Sci., III, 118, *Agrotis*.
1880. Grt., Bull. Geol. Surv., VI, 175, *Agrotis*.
1883. Grt., Proc. Am. Phil. Soc., XXI, 156, *Agrotis*.
♀ *nigripennis* Grt.
1880. Grt., Bull. Geol. Surv., VI, 159, *Agrotis*.
1882. Grt., New List, 25, pr. syn.

HABITAT.—Northern United States east of the Rocky Mountains; Colorado, Glenwood Springs in August; New Mexico; Canada; Massachusetts in September; New York in August.

The type is in the British Museum.

C. spectanda Smith.

1890. Smith, Trans. Am. Ent. Soc., XVII, 54, *Agrotis*.

HABITAT.—California.

The type is with Mr. Neumœgen.

C. pallipennis Smith.*

1887. Smith, Proc. U. S. Nat. Mus., x, 461, *Agrotis*.

HABITAT.—Colorado, Glenwood Springs, September and October; Northwest British Columbia.

The types are in the National Museum, and in the collections of Graef and Tepper.

C. basalis Grt.*

1879. Grt., No. Amer. Ent., I, 38, *Agrotis*.

HABITAT.—Colorado.

The type is in the British Museum.

C. solitaria Smith.

1885. Smith, Stett. Ent. Zeit., XLVI, 223, *Agrotis*.
1887. Smith, Proc. U. S. Nat. Mus., x, 462, *Agrotis*.

HABITAT.—Labrador.

The type is in the Moeschler collection. The specimen was sent me ticketed "? *conflua* var."

C. nostra Smith.*

1890. Smith, Trans. Am. Ent. Soc., XVII, 55, *Agrotis*.

HABITAT.—Sierra Nevada, California.

Types are in the National Museum; other in the Edwards and Neumœgen collections.

C. ochrogaster Gn.*

1852. Gn., Spec. Gen., Noct., I, 327, *Noctua*.
1856. Wlk., C. B. Mus., Het., x, 408, *Ochropleura*.
1880. Grt., Bull. Geol. Surv., VI, 566, *Agrotis*.
  illata Wlk.
1857. Wlk., C. B. Mus., Het., XI, 742, *Agrotis*.
1876. Grt., Can. Ent., VIII, 29, *Hadena*.
1877. Grt., Can. Ent., IX, 29=*Hadena suffusca*.
1890. Smith, Proc. U. S. Nat. Mus., XIII, 415, *Xylophasia*.
  insignata ‖ Wlk.
1856. Wlk., C. B. Mus., Het., x, 353, *Agrotis*.
1856. Wlk., C. B. Mus., Het., XI, 742, n. b. l.
  cinereomaculata Morr.
1874. Morr., Proc. Bost. Soc. N. H., XVII, 164, *Agrotis*.
1875. Grt., Can. Ent., VII, 226, *Agrotis*.
1875. Grt., Proc. Ac. Nat. Sci., 1875, 423, *Agrotis*.
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 196, pr. syn.
  gularis Grt.
1875. Grt., Proc. Ac. Nat. Sci., 1875, 424, *Agrotis*.
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 196, pr. syn.
  ♀ *turris* Grt.
1875. Grt., Can. Ent., VII, 226, *Agrotis*.
1880. Grt., Bull. Geol. Surv., VI, 582, = *gularis*.

HABITAT.—Canada in August; Northern and Eastern States; Michigan; Missouri; Colorado; Manitou in June; New York in July.

Mr. Grote has curiously mistaken Walker's species in referring it to *Hadena suffusca* Morr. It does bear a casual resemblance to Mr. Morrison's species; but the generic characters should have prevented the association. However, Mr. Morrison does furnish an exact synonym, for *illata* is almost precisely like *cinereomaculata*, the type of which I have seen. The types of Mr. Grote's species are in the British Museum. Guenée's type is in the Oberthür collection at Rennes.

Mr. Butler has placed a somewhat faintly marked specimen, labeled *turris* by Mr. Grote, under *saucia*, and has published them as identical.

C. idahoensis Grt.*

1878. Grt., Bull. Geol. Surv., IV, 171, *Agrotis.*

HABITAT.—Idaho; Colorado; Nevada.

The type is in the British Museum.

C. furtivus Smith.*

1890. Smith, Trans. Am. Ent. Soc., XVII, 56, *Agrotis.*

HABITAT.—California; Colorado, Glenwood Springs, August to October.

Types are in the National Museum and in Mr. Neumægen's collection. It is more than likely that my species will prove a somewhat marked form of *idahoensis*, connected with the type by numerous intergrades; but I am not ready to make this reference positively at present.

C. westermanni Stgr.

1857. Stgr., Stett. Ent. Zeit., 1857, 303, *Agrotis.*

HABITAT.—Labrador; Greenland.

The types are in the Berliner Museum. They indicate a somewhat variable species, tending toward the *obeliscoides* type; but all agreeing with the essential characters given in the "Revision."

C. obeliscoides Gn.*

1852. Gn., Spec. Gen., Noct., I, 293, *Agrotis.*
1856. Wlk., C. B. Mus., Het., X, 331, *Agrotis.*
1878. Graef, Bull. Bkln. Ent. Soc., I, 9, =*obelisca.*
obelisca ‡ Wlk.
1856. Wlk., C. B. Mus., Het., X, 323, *Agrotis.*
sexatilis Grt.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 100, *Agrotis.*
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 203, pr. syn.
1875. Grt., Can. Ent., VII, 102, pr. syn.

HABITAT.—East of the Rocky Mountains, north of Georgia; New Mexico; South Park, Colorado, in September; New York and Massachusetts in August.

Guenée's type is in the British Museum. It is probable that two species are confused under this name; it needs further material to decide finally.

C. perexcellens Grt.*

1880. Grt., Bull. Geol. Surv., VI, 156, *Agrotis.*
excellens ‖ Grt.
1875. Grt., Trans. Am. Ent. Soc., V, 115, *Agrotis.*
1880. Grt., Bull. Geol. Surv., VI, 156, n. b. l.
infelix Smith.
1890. Smith, Trans. Am. Ent. Soc., XVII, 57, *Agrotis.*

HABITAT.—Colorado, Glenwood Springs in September; California, September and October; Oregon; Vancouver.

Mr. Grote's type in the British Museum is exactly like my types in Mr. Neumœgen's collection and in the National Museum. I am not at all satisfied that there is not a good species such as I have placed in the *4-dentata* series in the "Revision;" but Mr. Grote's type is unquestionably like my *infelix* and my name sinks. The species is an excessively variable one, and its exact limits are scarcely defined as yet.

C. islandica Stgr.

1857. Stgr., Stett. Ent. Zeit., 1857, 232, *Agrotis.*

HABITAT.—Iceland.

A good series of this species is in Staudinger's collection, and both sexes are also represented in the museum at Berlin. Like the surrounding species, this is extremely variable, resembling both *obeliscoides* and *tessellata.* The maculation is perhaps more like the latter; but the color contrasts are sharper, and the species as a whole is brighter. I can not understand why Staudinger considered his *labradoriensis* a variety. He has now associated it in the collection with *dissona*, which it resembles much more nearly. In the Grote collection in the British Museum is a specimen of *opipara* labeled *islandica* by Mr. Grote, and also a California species labeled in the same way. The latter is really much more nearly correct.

C. colata Grt.

1881. Grt., Can. Ent., XIII, 131, *Agrotis.*

HABITAT.—Mount Hood, Oregon; Sierra Nevada, California.

The type in the British Museum is a ♀ without fore legs; but evidently belongs here. The median lines are almost obsolete.

C. lewisi Grt.

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 137, pl. 4, f. 10, *Pleonectopoda.*
1875. Harv., Bull. Buff. Soc. Nat. Sci., II, 272, *Agrotis.*
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 303, *Agrotis.*

HABITAT.—Colorado.

The type is in the British Museum. It is not so near *tessellata* as the description indicates; but it is very near *colata*—so near indeed that except for the ground color there is little difference. It will probably result eventually that the two are identical. Since my return from England, Mr. Bruce has sent me this species for identification.

C. divergens Wlk.*

1856. Wlk., C. B. Mus., Het., x, 327, *Agrotis.*
versipellis Grt.
1875. Grt., Can. Ent., VII, 172, pl. I, f. 9, *Agrotis.*
1879. Grt., Bull. Geol. Surv., v, 206, *Agrotis.*
1889. Butler, Trans. Ent. Soc. Lond., 1889, 380, pr. syn.

HABITAT.—Northern States to Colorado; California in June; Canada in June; Maine and Massachusetts in July.

The types are in the British Museum, and Mr. Butler was quite correct in the synonymy given.

C. redimicula Morr.*

1874. Morr., Proc. Bost. Soc. N. H., XVII, 165, *Agrotis.*
1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 57, *Agrotis.*
1879. Strck., Rept. Chief Eng., 1878-'79, v, 1861, *Agrotis.*

HABITAT.—Northern States east of the Rocky Mountains; Canada; Colorado, Glenwood Springs, August to October; New York in June, July, August, and September; Massachusetts in August.

The type is in the Tepper collection.

C. strigilis Grt.

1876. Grt., Bull, Buff. Soc. Nat. Sci., III, 81, *Agrotis.*

HABITAT.—Vancouver.

The type is in the British Museum, and is a species I had not before seen. It is a very heavily built insect, like *redimicula* in general habitus, the whitish included spaces of median lines prominent.

C. fusimacula Smith.

HABITAT.—New Mexico.

The type is in the Rutgers College collection.

C. atrifera Grt.

1878. Grt., Bull. Geol. Surv., IV, 173, *Agrotis.*
1880. Grt., Bull. Geol. Surv., VI, 260, *Agrotis.*

HABITAT.—Sierra Nevada, California; Colorado, Glenwood Springs in September; Maine.

The type is in the British Museum.

C. tesselloides Grt.*

1880. Grt., Bull. Geol. Surv., VI., 566, *Agrotis.*

HABITAT.—California; Arizona; Montana; Colorado.

The type is in the British Museum.

C. silens Grt.*

1875. Grt., Can. Ent., VII, 67, *Agrotis.*

HABITAT.—California; Arizona; Nevada; Colorado.

The type is in the British Museum.

C. perlentans Wlk.

1856. Wlk., C. B. Mus., Het., x, 352, *Agrotis.*

HABITAT.—"New York."

I have not been able to find this species in the British Museum, nor has Mr. Butler been able to trace it. Messrs. Grote and Robinson saw it, and to them it suggested a rubbed *tritici*. It is quite likely to be either *tessellata* or *insulsa*, and is almost certainly a species known to us under another name.

Here ends the agrotid series. I have omitted *Agrotis vetusta* Wlk., of which the type is lost, and which can not possibly be made out from the description. The latter will be found in my "Revision" if anyone cares to try to identify it.

Genus **RICHIA** Grt.

1887. Grt., Can. Ent., XIX, 44.

Mr. Grote separates this from *Ammaconia*, I can not say at present how correctly, since I have no European material for comparison. If the characters given by Mr. Grote hold, the genus is probably good. They will not hold for *sculptilis*, certainly, for I redescribed that in *Agrotis*, to which it belongs. *Ammaconia* is by Lederer, Noct. Eur., 1857, 97.

R. chortalis Harv.*

1875. Harv., Bull. Buff. Soc. Nat. Sci., II, 272, *Agrotis.*
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 5, 74, pl. 3, f. 9, *Ammaconia.*
1879. Grt., Bull. Geol. Surv., V, 207, *Agrotis.*
1887. Grt., Can. Ent., XIX, 44, *Richia.*
var. **aratrix** Harv.
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 74, pl. 3, f. 8, *Ammaconia.*
1879. Grt., Bull. Geol. Surv., V, 207, *Agrotis.*
1887. Grt., Can. Ent., XIX, 44, *Richia*, an dim. var. pr.

HABITAT.—Texas, in November; Arizona; Colorado, Glenwood Springs, September and October; New Mexico.

Types of both forms are in the British Museum. The exact relation of the two forms to each other is not yet known. They are not geographic races, nor seasonal varieties.

R. parentalis Grt.*

1879. Grt., No. Am. Ent., I, 44, *Agrotis.*
1881. Grt., Trans. Kans. Ac. Sci., VII, 66, *Agrotis.*
1882. Grt., Ill. Essay, 53, pl. I, f. 13, *Ammaconia.*
1887. Grt., Can. Ent., XIX, 44, *Richia*, et var. *decipiens.*
1889. Butler, Trans. Ent. Soc. Lond., 1889, 383.
var. **decipiens** Grt.
1879. Grt., No. Am. Ent., I, 45, *Agrotis.*
1882. Grt., New List, 26, *Ammaconia.*
1887. Grt., Can. Ent., XIX, 44, *Richia.*
1889. Butler, Trans. Ent. Soc. Lond., 1889, 383, an var. *cuprea.*

HABITAT.—Colorado, Glenwood Springs, September and October; New Mexico.

Types of species and variety are in the British Museum. Mr. Butler suggests that these are the same as the European *Agrotis cuprea* and claims to have typical *cuprea* from Washington. It would take a great deal of comparison to convince me of the correctness of this reference.

R. distichoides Grt.

1883. Grt., Trans. Kans. Ac. Sci., VIII, 48, *Ammaconia*.

HABITAT.—New Mexico.

The type is with Prof. Snow.

Genus **ANYTUS** Grt.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 141

A. privatus Wlk.*

1857. Wlk., C. B. Mus., Het., XI, 521, *Polia*.
1889. Butler, Trans. Ent. Soc. Lond., 1889, 384, *Anytus*.
sculptus Grt.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 114, pl. 3, f. 1, *Xylina*.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 145, *Anytus*.
1880. Grt., No. Am. Ent., I, 93, *Agrotis*.
1889. Butler, Trans. Ent. Soc. Lond., 1889, 384, pr. syn.
var. **planus** Grt.
1882. Grt., Can. Ent., XIV, 183, *Anytus*.

HABITAT.—Canada in August; Eastern and Middle States; Colorado; New York and New Hampshire, August and September.

Types of *privatus* and *sculptus* are in the British Museum, and Mr. Butler is correct in uniting them. The type of *planus* is in the Hill collection.

Mr. Butler thinks this is much nearer to *Pharetra*, an Arctiid, than to the Noctuidæ. I do not know *Pharetra*; but I have no serious doubt as to the correctness of the present location of *Anytus*.

Genus **EUCOPTOCNEMIS** Grt.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 13.

E. fimbriaris Gn.

1852. Gn., Spec. Gen., Noct., I, 172, *Heliophobus*.
1856. Wlk., C. B Mus., Het., IX, 208, *Heliophobus*.
1874. Morr., Proc. Bost. Soc. N. H., XVII, 131, *Pleonectopoda*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 13, *Eucoptocnemis*.
obvia Wlk.
1858. Wlk., C. B. Mus., Het., XV, 1707, *Graphiphora*.
1889. Butler, Trans. Ent. Soc. Lond., 1889, 384, pr. syn.

HABITAT.—North America; Massachusetts.

The types are in the British Museum, and represent a species I had never seen. I wonder whether Mr. Morrison really had this species before him when he wrote in 1874? I have seen specimens of *Agrotis worthingtoni* labeled *fimbriaris* in Mr. Morrison's handwriting in the National Museum and elsewhere, and the description given fits well to what I have seen of that species. Unfortunately the wing form which might decide is not given. In color and maculation *worthingtoni* and *fimbriaris* agree wonderfully well, and both have lengthily pectinated antennæ. But *fimbriaris* has oddly short, broad wings, while the others are normal for *Porosagrotis.* Walker's species has the "locality unknown."

Genus **AGROTIPHILA** Grt.

1875. Grt., Ann. Lyc. Nat. Hist., N. Y., XI, 107.

A. alaskæ Grt.*

1876. Grt., Bull. Buff. Soc. Nat. Sci., III, 84, pl. 4, f. 1, *Agrotis.*
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 54, *Agrotiphila.*

HABITAT.—Alaska.

The type is in the British Museum.

A. staudingeri Moeschl.*

1862. Moeschl., Wien. Ent. Monatschr., VI, 132, pl. I, f. 4, *Agrotis.*
1891. Smith, List Lepidoptera, 40, *Agrotiphila.*
1891. Smith, Trans. Am. Ent. Soc., XVIII, 133, *Agrotiphila.*
montana Morr.
1875. Morr., Ann. Lyc. Nat. Hist., N. Y., XI, 95, *Agrotis.*
1875. Grt., Ann. Lyc. Nat. Hist., N. Y., XI, 107, *Agrotiphila.*
1875. Grt., List Noctuidæ, 17, *Agrotiphila.*
1891. Smith, List Lepidoptera, 40 = *staudingeri.*
1891. Smith, Trans. Am. Ent. Soc., XVIII, 133 = *standingeri.*
detracta Wlk.

HABITAT.—Labrador; White Mountains; Montana; Colorado 12,000 feet, July 22 to August 12.

The type of *detracta* is in the British Museum; that of *staudingeri* I have seen by the courtesy of Mr. Moeschler, and there are specimens named by Moeschler in the Berlin Museum. Mr. Morrison's type is in the Tepper collection. These all refer to one species, no specimens from Colorado being in any collection. I have been unable to find any description for *detracta* Wlk., and it may be that the name will prove the earliest if it is at all published.

A. colorado Smith.*

1891. Smith, Trans. Am. Ent. Soc., XVIII, 133, *Agrotiphila.*

HAITAT.—South Park, Colorado.

Types are in the National Museum and in the Neumœgen collection.

A. rigida Smith.

1891. Smith, Trans. Am. Ent. Soc., XVIII, 133, *Agrotiphila.*

HABITAT.—South Park, Colorado.

The type is in Mr. Neumœgen's collection.

This genus connects *Agrotis* with *Anarta*, and emphasizes also the Heliothine tendencies of *Porosagrotis* and *Carneades.*

Genus **PSAPHIDIA** Wlk.

1865. Wlk, C. B. Mus., Het., XXXII, 447.

Under the title *Dicopinæ*, the genera *Dicopis*, *Eutolype*, and *Copipanolis* are monographically treated by me in the Proceedings of the U. S. National Museum for 1892, Vol. XV, pp. 52–63. All the species are fully described there, and special reference to this paper is not made except where necessary to authenticate a species or give authority for a change. The generic term *Psaphidia* Wlk., must, under the rules, replace *Dicopis*, though not nearly so appropriate and certainly not as well described.

P. grotei Morr.*

1874. Morr., Bull. Buff. Soc. Nat. Sci., I, 274, *Valeria*.
1882. Smith, Bull. Bkln. Ent. Soc., V, 41, ? an *Valeria*.
1883. Grt., Proc. Am. Phil. Soc., XXI, 146, 168, *Copivaleria*.
1892. Smith, Proc. U. S. Nat. Mus., XV, 54, *Dicopis*.

HABITAT.—Canada, Eastern, Middle, and Central States; April and May.

The type is in the British Museum.

P. resumens Wlk.*

1865. Wlk., C. B. Mus., Het., XXXII, 448, *Psaphidia*.
viridescens Wlk.
1865. Wlk., C. B. Mus., Het., XXXII, 601, *Cymatophora*.
1868. Grt. & Rob., Trans. Am. Ent. Soc., II, 86, *Hadena*.
1882. Grt., Ill. Essay, 40, *Dicopis*.
1892. Smith, Proc. U. S. Nat. Mus., XV, 55, ? = *muralis*.
muralis Grt.
1874. Grt., 6th Rept. Peab. Ac. Sci., App. 23, *Dicopis*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 77, pl. I, f. 1, *Dicopis*.
1875. Grt., Stett. Ent. Zeit., XXXVI, 194, *Dicopis*.

HABITAT.—New York to Florida and Texas; Missouri in April; Texas in March; Massachusetts in April and May.

All the types are in the British Museum and refer to one species only. *P. resumens* was described as "near *Charadra*," and the latter as a Bombycid. A specimen of this same species also bears the name *Notodenta gemina*. In the Berliner Museum is a specimen labeled *Acronycta initialis*, without any name of author.

P. electilis Morr.

1875. Morr., Proc. Bost. Soc. Nat. Hist., XVIII, 114, *Dicopis*.

HABITAT.—Pennsylvania.

I do not know this species and have not seen the type.

D. thaxterianus Grt.

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 196, *Dicopis*.
1881. Grt., Papilio, I, 48, *Dicopis*.

HABITAT.—Massachusetts in April; Texas.

The types are with Dr. Thaxter, and represent a very pretty species.

Genus **EUTOLYPE** Grt.
1874. Grt., Proc. Ac. Nat. Sci., Phil., XXVI, 198.

E. bombyciformis Smith.*

1892. Smith, Proc. U. S. Nat. Mus., XV, 58, *Eutolype.*

HABITAT.—Massachusetts to Missouri, in March.

The type is in the U. S. National Museum. It is the species usually labeled *Dicopis electilis* in collections.

E. depilis Grt.*

1881. Grt., Papilio, I, 48, *Dicopis.*
1892. Smith, Proc. U. S. Nat. Mus., XV, 58, *Eutolype.*

HABITAT.—New York to Ohio; Texas, in March.

The Texan specimen before Mr. Grote is now in the National Museum. The Ohio specimen, upon which the species is really based, is in Mr. Neumœgen's collection.

E. rolandi Grt.*

1874. Grt., Proc. Ac. Nat. Sci. Phil., XXVI, 198, *Eutolype.*
vernalis Morr.
1874. Morr., Proc. Bost. Soc. Nat. Hist., XVII, 133, *Copipanolis.*
1875. Grt., Can. Ent., VII, 17, pr. syn.
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 210, pr. syn.

HABITAT.—Massachusetts in April; Missouri in April and May; Texas in February and March.

The type is in the British Museum.

E. damalis Grt.

1880. Grt., Bull. U. S. Geol. Surv., V, 208, *Dicopis.*
1881. Grt., Papilio, I, 49, *Dicopis.*
1892. Smith, Proc. U. S. Nat. Mus., XV, 60, *Eutolype.*

HABITAT.—California.

The type is in the Edwards collection.

Genus **COPIPANOLIS** Grt.
1874. Grt., 6th Rept. Peab. Ac. Sci., App., 25.

C. borealis Smith.

1892. Smith, Proc. U. S. Nat. Mus., XV, 61, *Copipanolis.*

HABITAT.—St. Anthony's Park, Minnesota, in April.

The type is in the collection of Mr. H. Schoenborn, of Washington, D. C.

C. cubilis Grt.

1874. Grt., 6th Rept. Peab. Ac. Sci., App., 25, *Copipanolis.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 77, pl. 1, f. 6, *Copipanolis.*
1875. Grt., Stett. Ent. Zeit., XXXVI, 197, *Copipanolis.*

HABITAT.—Michigan, March; Massachusetts, March, April, May.

The type is in the British Museum. It agrees with the figure and description and is fully distinct from the Texan form usually named *cubilis* in collections.

C. fasciata Smith.*

1892. Smith, Proc. U. S. Nat. Mus., XV, 61, *Copipanolis.*

HABITAT.—Missouri in April: Texas in January and February.

Types are in the National Museum. This is the species usually named *cubilis* in collections.

C. stigma Smith.

1890. Smith, Ent. Amer., VI, 220, *Copipanolis.*

HABITAT.—Florida.

The type is in Mrs. Slosson's collection.

Genus **BARATHRA** Hbn.

1816. Hbn., Verzeichniss, 218.

A description of this genus and of the species referable to it, will be found in the Proc. U. S. Nat. Mus., XII, 457. *Copimamestra* Grt., has the same type as *Barathra* Hbn., and goes into the synonymy.

B. occidenta Grt.

1883. Grt., Ann. and Mag. Nat. Hist., 1883, 53, *Copimamestra.*
1883. Grt., Trans. Kans. Ac. Sci., VIII, 55, *Copimamestra.*
1889. Smith, Proc. U. S. Nat. Mus., XII, 458, *Barathra.*

HABITAT.—New Mexico.

Types are with Prof. Snow and Mr. Neumœgen.

B. curialis Smith.*

1887. Smith, Proc. U. S. Nat. Mus., X, 470, *Copimamestra.*
1889. Smith, Proc. U. S. Nat. Mus., XII, 458, *Barathra.*

HABITAT.—Kittery Point, Maine; Franconia, New Hampshire.

The type is with Dr. Thaxter.

Genus **ADMETOVIS** Grt.

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 133.

A. oxymorus Grt.

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 133, pl. IV, f. 5, *Admetovis.*

HABITAT.—Sierra Nevada, California; Colorado.

The type is in the Edwards collection. What Mr. Grote describes as the male is quite a different species which I have described as *Mamestra prodeniformis.* The right of *Admetovis* to generic rank is decidedly questionable.

Genus **MAMESTRA** Ochs.

1816. Ochs., Schmett. Eur., IV, 76.

A monographic revision of the species of this genus will be found in the Proc. U. S. Nat. Mus., XIV, 197–276, Pl. VIII—XI, 1891. This paper contains descriptions of all the species, but is not referred to in the bibliography save when necessary to establish synonymy or generic reference. Where not otherwise stated, my identifications are correct.

M. discalis Grt.*

1877. Grt., Bull. Geol. Surv., III, 797, *Mamestra.*

HABITAT.—Colorado, Glenwood Springs, September and October; California; New Mexico.

The type is in the British Museum.

M. rogenhoferi Mœschl.

1870. Mœschl., Stett. Ent. Zeit., XXXI, 269, *Mamestra.*

HABITAT.—Labrador.

The type is in the Mœschler collection.

M. nimbosa Gn.*

1852. Gn., Spec. Gen., Noct., II, 77, *Aplecta.*
1857. Wlk., C. B. Mus., Het., XI, 555, *Eurois.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 102, *Mamestra.*
1875. Speyer, Stett. Ent. Zeit., XXXVI, 142, 349, *Mamestra.*

HABITAT.—Canada; Northern, Eastern, and Middle States, June, July, and August; Colorado; British Columbia.

The type is in the British Museum.

M. imbrifera Gn.*

1852. Gn., Spec. Gen., Noct., II, 76, *Aplecta.*
1857. Wlk., C. B. Mus., Het., XI, 555, *Eurois.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 102, *Mamestra.*
1875. Speyer, Stett. Ent. Zeit., XXXVI, 144, *Mamestra.*

HABITAT.—Canada; Northern, Eastern, and Middle States in July; Colorado.

The type is in the British Museum.

M. purpurissata Grt.*

1864. Grt., Proc. Ent. Soc. Phil., III, 82, pl. I, f. 5, *Eurois.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 102, *Mamestra.*
var. **juncimacula** Smith.*
1882. Smith, Bull. Bkln. Ent. Soc., V, 67, *Hadena.*
1891. Smith, Proc. U. S. Nat. Mus., XIV, 206, an var. pr.

HABITAT.—Northern, Eastern, and Middle States; Utah; Colorado; July to September.

Mr. Grote's type is in the British Museum; mine is in the National Museum. A series of specimens received from Colorado, collected by Bruce, are all of the variety, indicating a geographical race at least,

M. insolens Grt.*

1874. Grt., Bull. Buff. Nat. Sci., II, 65, *Dianthœcia.*
1881. Grt., Can. Ent., XIII, 130, *Mamestra.*
♂ *arictis* Grt.
1879. Grt., Bull. Geol. Surv., V, 207, *Mamestra.*
1881. Grt., Can. Ent., XIII, 130, pr. syn.
earina, Morr.
1874. Morr., Proc. Bost. Soc. N. H., XVII, 158, *Tæniocampa.*
1891. Smith, Proc. U. S. Nat. Mus., XIV, 207, pr. syn.

HABITAT.—California; August and October.

Mr. Grote's types are in the British Museum. Mr. Morrison's is in the Tepper Collection.

M. leucogramma Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 140, *Dianthœcia.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 64, *Dianthœcia.*
1881. Grt., Can. Ent., XIII, 130, *Mamestra.*

HABITAT.—California; April, August, October.

The types are in the Edwards collection and in the British Museum. Specimens exactly like them are in the National Museum.

M. lepidula Smith.*

1887. Smith, Proc. U. S. Nat. Mus., X, 463, *Mamestra.*

HABITAT.—Texas.

The type is in the National Museum; a duplicate is in the Edwards collection.

M. determinata Smith.*

1891. Smith, Proc. U. S. Nat. Mus., XIV, 209, *Mamestra.*

HABITAT.—Colorado. foothills.

The type is in the National Museum.

M. meditata Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 104, *Dianthœcia.*
1881. Grt., Can. Ent., XIII, 130, *Mamestra.*

HABITAT.—Canada to Virginia, west to the Mississippi; May, June, August, and September; Kansas, August.

The type is in the British Museum.

M. lustralis Grt.*

1875. Grt., Can. Ent., VII, 223, *Dianthœcia.*
1881. Grt., Can. Ent., XIII, 127, *Mamestra.*

HABITAT.—Canada to Virginia; west to Wisconsin and Colorado; Adirondacks in July.

The type is in the British Museum.

M. detracta Wlk.*

1857. Wlk., C. B. Mus., Het., XI, 733, *Hadena.*
clariplena Grt.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 194, *Mamestra.*
1881. Grt., Can. Ent., XIII, 128, pr. syn.

HABITAT.—Canada, south to Virginia, west to Wisconsin, and New Mexico; Canada, in July; Massachusetts and New Jersey, in June.

Walker's type is in the British Museum; Mr. Grote's specimen is in the Lintner collection.

M. gnata Grt.*

1882. Grt., Can. Ent., XIV, 170, *Mamestra.*

HABITAT.—Arizona; New Mexico.

The type is in Mr. Neumœgen's collection.

M. distincta Hbn.*

1810. Hbn., Samml. Ex. Schmett., I, pl. 194, *Achatia.*
1816. Hbn., Verzeichniss, 219, *Astrapetis.*
1852. Gn., Spec. Gen., Noct., II, 91, *Hadena.*
1857. Wlk., C. B. Mus., Het., XI, 583, *Hadena.*
1868. G. & R., Trans. Am. Ent. Soc., II, 197, pl. 3, f. 72, *Hadena.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 156, *Mamestra.*
vitis French.
1879. French, Can. Ent., XI, 76, *Dicopis.*
1879. Grt., No. Am. Ent., I, 16, pr. syn.

HABITAT.—Canada to Texas; Illinois and Central States to central Colorado; Delaware in April.

M. crotchii Grt.

1880. Grt., Bull. Bkln. Ent. Soc., III, 29, *Mamestra.*
var. **fusculenta** Smith.*
1891. Smith, Proc. U. S. Nat. Mus., XIV, 213, *Mamestra.*

HABITAT.—Colorado; Oregon; California, in June.

The type of the species is in the British Museum. The type of the variety is in the National Museum.

M. farnhami Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 103, pl. 3, f. 2, *Mamestra.*

HABITAT.—Colorado, Glenwood Springs, in August.

A specimen marked "type" is in the British Museum; another marked in the same way is in the Edwards collection.

M. liquida Grt.*

1881. Grt., Papilio, I, 58, *Mamestra.*

HABITAT.—Washington; Oregon, May and June; Colorado.

The type is in the British Museum.

M. capsularis Gn.*

1852. Gn., Sp. Gen., Noct., II, 22, pl. 8, f. 3, *Dianthœcia.*
1857. Wlk., C. B. Mus., Het., XI, 505, *Dianthœcia.*
1881. Grt., Can. Ent., XIII, 128, *Mamestra.*
propulsa Wlk.
1857. Wlk., C. B. Mus., Het., XI, 529, *Raphia.*
1868. G. & R., Trans. Am. Ent. Soc., II, 78, pr. syn.

HABITAT.—Middle States; Maryland; Florida; Colorado; Kansas, in June.

The types of both the Guenée and Walker species are in the British Museum and were correctly referred by Mr. Grote. Mr. Walker's description has absolutely no applicability to this insect, which led me to doubt the correctness of the synonymy. The specimen in the National Museum is correctly identified.

M. vitiula Grt.

1882. Grt., Trans. Kans. Acad. Sci., VIII, 48, *Mamestra.*

HABITAT.—New Mexico.

The type is with Mr. Neumœgen.

M. prodeniformis Smith.*

1887. Smith, Proc. U. S. Nat. Mus., IX, 464, *Mamestra.*

HABITAT.—Southwest Arizona; New Mexico.

A type is in the National Museum; another with Mr. Neumœgen.

M. atlantica Grt.*

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 12, *Mamestra.*
1875. Grt., Check List, Noct., 7, *Mamestra.*
1881. Grt., Can. Ent., XIII, 128, ? =*dissimilis.*
1889. Butler, Trans. Ent. Soc. Lond., 385=*dissimilis.*
w-latinum ‡ Gn.
1852. Gn., Sp. Gen., Noct., II, 105, *Hadena.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 12, pr. syn.
discolor Speyer.
1875. Speyer, Stett. Ent. Zeit., XXXVI, 142, *Mamestra dissimilis* var.
1881. Grt., Can. Ent., XIII, 128, pr. var.
1882. Grt., New List, 26, pr. syn.

HABITAT.—Canada; Atlantic States to Virginia, west to Wisconsin; June, July, and August.

Mr. Grote's type is in the British Museum, placed under *dissimilis* by Mr. Butler. It will require an agreement in sexual structure to convince me of the identity of the American with the European species.

M. radix Wlk.*

1856. Wlk., C. B. Mus., Het., X, 332, *Agrotis.*
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 210, *Agrotis.*
dimmocki Grt.
1875. Grt., Proc. Ac. Nat. Sci. Phil., 1875, 420, *Mamestra.*
1891. Smith, Proc. U. S. Nat. Mus., XIV, 269, *Mamestra.*
1891. Butler, Entomologist, XXIV, 240, pr. syn.
desperata Smith.
1891. Smith, Proc. U. S. Nat. Mus., XIV, 221, *Mamestra.*

HABITAT.—Nova Scotia; Hudson's Bay territory; Maine; New Hampshire; Colorado; Sierra Nevada, California.

The types of the Grote and Walker species are in the British Museum, and are the same as my *desperata*. Mr. Butler's reference was not made until October 1891, after my revision was published. I had had the species as *dimmocki*, and had so named it in the National Museum and elsewhere. Mr. Grote's description misled me and induced me to correct a supposed misidentification. The type is somewhat rubbed; but the M of the s. t. line is distinct, not wanting, as stated by Mr. Grote.

M. canadensis Smith.

1887. Smith, Proc. U. S. Nat. Mus., x, 464, *Mamestra*.

HABITAT.—New Brunswick.

The type is with Mr. Thaxter.

M. nevadæ Grt.

1876. Grt., Bull. Buff. Soc. Nat. Sci., III, 84, *Mamestra*.
1889. Butler, Trans. Ent. Soc. Lond., 1889, 385=*thalassina*.

HABITAT.—Sierra Nevada, California.

This seems a good species, almost midway between *subjuncta* and *atlantica*. I had not seen it before, the specimen in the Edwards collection being erroneously named.

M. subjuncta G. and R.

1868. G. & R., Trans. Am. Ent. Soc., II, 198, pl. 3, f. 71, *Hadena*.
1869. Riley, 1st Rept. Ins. Mo., 84, pl. I, f. 14–17, *Hadena*.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 282, *Mamestra*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 12, *Mamestra*.
1875. Speyer, Stett. Ent. Zeit., XXXVI, 138, *Mamestra*.

HABITAT.—Canada; Northern, Eastern, and Middle States; Ohio; Minnesota; Colorado; Nebraska; New Mexico, June to September; Oregon, May and June.

A specimen, not the type, is in the British Museum.

M. grandis Bdv.*

1840. Bdv., Gen. et Ind. Meth., 120, No. 950, *Hadena*.
1841. Gn., Noct. Ind. Meth., 244, *Hadena*.
1852. Gn., Spec. Gen., Noct., II, 105, pl. VIII, f. 10, *Hadena*.
1857. Wlk., C. B. Mus., Het., XI, 578, *Hadena*.
1857. Led., Noct. Eur., 90, *Mamestra*.
1883. Thaxter, Papilio, III, 17, *Mamestra*.
libera Wlk.
1856. Wlk., C. B. Mus., Het., IX, 179, *Xylophasia*.
1882. Grt., Ill. Essay, 44, pr. syn.

HABITAT.—Greenland; Lapland; Canada; Maine to Pennsylvania; west to Illinois, Wisconsin; Minnesota and Colorado, May, June, and October.

The arctic localities are from Walker, whose type is in the British Museum, and is what we know as *grandis*.

M. invalida Smith.*

1891. Smith, Proc. U. S. Nat. Mus., XIV, 225, *Mamestra.*

HABITAT.—Colorado; California—Sierra Nevada, Placer County in June; Portland, Oregon, May and June.

Types are in the National Museum and in the Edwards collection.

M. trifolii Rott.*

1776. Rott., Naturf., IX, 131, *Noctua.*
1875. Speyer, Stett. Ent. Zeit., XXXVI, 137, *Mamestra.*
chenopodii Fabr.
1787. Fabr., Mant. Ins., II, 146, *Noctua.*
1793. Gmel., ed. Linn. Syst. Nat., 2512, *Noctua.*
1793. Fabr., Ent. Syst., III, 2, 68, *Noctua.*
1811. Oliv., Enc. Meth., VIII, 303, *Noctua.*
1816. Hbn., Verzeichniss, 219, *Diataraxia.*
1852. Gn., Spec. Gen., Noct., II, 97, *Hadena.*
1857. Wlk., C. B. Mus., Het., XI, 570, *Hadena.*
1881. French, Can. Ent., XIII, 23, larva.
1881. Coquillett, Papilio, I, 7, *Mamestra.*
albifusa Wlk.
1857. Wlk., C. B. Mus., Het., XII, 753, *Hadena.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 104, *Mamestra.*
1875. Speyer, Stett. Ent. Zeit., XXXVI, 202, pr. syn.
1881. Grt., Can. Ent., XIII, 128, pr. syn.
glaucovaria Wlk.
1860. Wlk., Can. Nat. and Geol., V, 255, *Apamea.*
1877. Grt., Can. Ent., IX, 28, pr. syn.
major Speyer.
1875. Speyer, Stett. Ent. Zeit., XXXVI, 138, pr. var.
1881. Grt., Can. Ent., XIII, 128, pr. var.
var. *oregonica* Grt.
1881. Grt., Can. Ent., XIII, 230, *Mamestra.*
1891. Smith, Proc. U. S. Nat. Mus., XIV, 227, pr. var.

HABITAT.—Europe and North America; May, June, August, and September.

The types of *albifusa* and *oregonica* are in the British Museum; that of *glaucovaria* is in the collection of the Ent. Soc. of Ontario. I have omitted *marmorosa* as a variety, because it does not agree with any of our forms, and may indeed be specifically distinct. Mr. Neumœgen also has a "type" of *oregonica*.

M. u-scripta Smith.*

1891. Smith, Proc. U. S. Nat. Mus., XIV, 228, *Mamestra.*

HABITAT.—Sierra Nevada, California; Colorado.

Types are in the National Museum and in the Edwards collection.

M. rosea Harv.

1874. Harv., Bull. Buff. Soc. Nat. Sci., II, 119, *Mamestra.*

HABITAT.—Canada; Northern and Eastern States; Colorado, Oregon, New York, and Massachusetts, in May and June.

The type is in the British Museum.

M. congermana Morr.*

1874. Morr., Can. Ent., VI, 106, *Hadena.*
1878. Grt., Bull. Geol. Surv., IV, 187, *Mamestra.*
1880. Grt., Bull. Bkln. Ent. Soc., III, 39, *Mamestra.*

HABITAT.—Northern, Eastern, and Middle States; Colorado; May 12–26, in New York.

The type is in the Tepper collection.

M. rubefacta Morr.*

1874. Morr., Can. Ent., VI, 249, *Ceramica.*
1880. Grt., Can. Ent., XII, 185,=*Mamestra vindemialis.*
1881. Grt., Can. Ent., XIII, 128,=*M. vindemialis.*

HABITAT.—Canada; Eastern, Northern, and Middle States; May and June.

Mr. Grote's reference of this species to *vindemialis* Gn., is incorrect. The type of Guenée's species is in the British Museum, and is said to be from Florida, while I have never seen Mr. Morrison's species from south of Pennsylvania. I have referred *vindemialis* to *Tæniocampa*, where notes on it should be sought. I do not know where Mr. Morrison's type can be found.

M. picta Harr.*

1847. Harr., Rept. Ins. Mass., 329, *Mamestra.*
1862. Harr., Inj. Ins., Flint ed., 452, ff. 223, 224, *Mamestra.*
1870. Riley, 2d Rept. Ins. Mo., 112, f. 82, *Mamestra.*
1872. Lint., Ent. Cont., III, 137, *Mamestra.*
1882. Grt., Papilio, II, 99, *Mamestra.*
exusta Gn.
1852. Gn., Spec. Gen., Noct., I, 344, *Ceramica.*
1856. Wlk., C. B. Mus., Het., X, 417, *Ceramica.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 22, pr. syn.
contraria Wlk.
1856. Wlk., C. B. Mus., Het., IX, 78, *Mythimna.*
1868. G. & R., Trans. Am. Ent. Soc., II, 77, pr. syn.
1882. Grt., Ill. Essay, 41, pr. syn.

HABITAT.—Canada to Virginia; west to Nebraska; Wisconsin; Colorado; Canada in June; New York and New Jersey, June, August, and September.

Types of the Walker and Guenée names are in the British Museum and have been correctly referred to Harris's species. A type of *exusta* is also to be found in the Jardin des Plantes at Paris.

M. cristifera Wlk.*

1858. Wlk., C. B. Mus., Het., xv, 1651, *Acronycta.*
1882. Grt., Ill. Essay, 38, an *Hadenid?*
1889. Butler, Trans. Ent. Soc. Lond., 1889, 385, *Mamestra.*
lubens Grt.
1875. Grt., Trans. Am. Ent. Soc., v, 113, *Mamestra.*
1875. Grt., Proc. Ac. Nat. Sci. Phil., 425, *Mamestra.*
1875. Morr., Proc. Bost. Soc. N. H., xviii, 118, *Mamestra.*
1881. Grt., Can. Ent., xiii, 127, *Mamestra.*
1889. Butler, Trans. Ent. Soc. Lond., 1889, 385, pr. syn.
rufula ‖ Morr.
1875. Morr., Proc. Ac. Nat. Sci. Phil., 62, *Mamestra.*
1875. Grt., Proc. Ac. Nat. Sci. Phil., 425, pr. syn.
1881. Grt., Can. Ent., xiii, 127, pr. syn.
brassicæ ‡ Grt.
1873. Grt., Bull. Buff. Soc. Nat. Sci., i, 103, *Mamestra.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., ii, 12, *Mamestra.*
1875. Morr., Proc. Ac. Nat. Sci. Phil., 62, pr. syn.
1875. Grt., Stett. Ent. Zeit., xxxvi, 341, pr. syn.

HABITAT.—Hudson's Bay Territory; Canada; Maine to Pennsylvania, west to Colorado; Oregon, May and June.

The types of the Walker and Grote species are in the British Museum and are the same.

M. assimilis Morr.*

1874. Morr., Bull. Buff. Soc. Nat. Sci., ii, 119, *Mamestra.*
1881. Goodell, Papilio, i, 15, larva.
var. **pulverulenta** Smith.
1887. Smith, Proc. U. S. Nat. Mus., x, 468, *Mamestra.*

HABITAT.—Canada; Northern and Eastern States; Northern New York in July; Massachusetts in June and July.

The type is in the Tepper collection; Mrs. Fernald has the type of the variety.

M. latex Gn.*

1852. Gn., Sp. Gen., Noct., ii, 78, *Aplecta.*
1857. Wlk., C. B. Mus., Het., xi, 556, *Eurois.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., i, 103, *Mamestra.*
demissa Wlk.
1857. Wlk., C. B. Mus., Het., xi, 728, *Apamea.*
1868. G. & R., Trans. Am. Ent. Soc., ii, 78, pr. syn.
1882. Grt., Ill. Essay, 44, pr. syn.

HABITAT.—Canada; Northern, Eastern, and Middle States. May, June, July.

The types of both names are in the British Museum and have been correctly applied to the same species.

M. passa Morr.

1874. Morr., Proc. Bost. Soc. N. H., XVII, 139, *Mamestra.*
1875. Grt., Can. Ent., VII, 102, ? =*pensilis.*

HABITAT.—California.

The type is in the Tepper collection, and it is the only specimen thus far known to me.

M. adjuncta Bdv.*

1841. Bdv., in Gn., Noct. Ind. Meth., 243, *Miselia.*
1852. Gn., Spec. Gen., Noct., I, 199, *Mamestra.*
1856. Wlk., C. B. Mus., Het., IX, 234, *Mamestra.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 108, *Hadena.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 309, *Mamestra.*
1874. Lint., Ent. Cont., III, 161; larva on *Solidago.*
1877. Goodell, Can. Ent., IX, 60; larva on *Pteris aquilina.*
1884. Bean, Can. Ent., XVI, 68; larva on *Wigelia rosea.*

HABITAT.—Canada; Northern, Eastern, and Middle States, west to Illinois, Missouri, Minnesota. May, June, August, and October.

Types are in the British Museum, and in the Oberthür collections.

M. variolata Smith.*

1887. Smith, Proc. U. S. Nat. Mus., X, 467, *Mamestra.*

HABITAT.—Washington.

Types are in the National Museum and in Mr. Graef's collection.

M. glaciata Grt.

1882. Grt., Can. Ent., XIV, 170, *Mamestra.*

HABITAT.—Arizona; Colorado.

The type is with Mr. Neumœgen.

M. minorata Smith.*

1887. Smith, Proc. U. S. Nat. Mus., X, 467, *Mamestra.*

HABITAT.—California: Colorado.

The type is in the Edwards collection.

M. defessa Grt.*

1880. Grt., Can. Ent., XII, 88, *Mamestra.*

HABITAT.—California—May 22.

The type is in the British Museum.

M. chartaria Grt.

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 138, pl. 4, f. 12, *Mamestra.*

HABITAT.—California; Washington; Colorado; June.

A type is in the British Museum; another in the Cambridge collection.

M. repentina Morr.

1875. Morr., Proc. Bost. Soc. N. H., XVIII, 118, *Mamestra.*
1891. Smith, Proc. U. S. Nat. Mus., XIV, 242, *Mamestra.*

HABITAT.—West Hoboken, New Jersey.

The type is in Mr. Meyer's collection. I have in my Revision of the species doubted the American habitat of the species, but have had no opportunity of confirming my doubts.

M. brachiolum Harv.

1876. Harv., Can. Ent., VIII, 6, *Mamestra.*

HABITAT.—Texas; Arizona.

The type is in the British Museum.

M. beanii Grt.

1877. Grt., Can. Ent., IX, 87, *Mamestra.*
1879. Grt., No. Am. Ent., I, 12, *Mamestra.*

HABITAT.—Illinois; Texas; Colorado.

The type is in the British Museum. The species is correctly placed in my Revision; but the type is a much larger specimen than any I had seen.

M. legitima Grt.*

1864. Grt., Proc. Ent. Soc. Phil., III, 82, pl. 2, f. 4., *Apamea.*
1874. Grt., Proc. Bost. Soc. N. H., XVI, 241, *Mamestra.*
1892. Edw. & Elliott, Bull. Am. Mus. N. H., IV, 77, larva.

HABITAT.—Canada; Northern, Eastern, Middle, and Central States: June, July, August, September; Oregon, Portland in May.

The type should be, but is not, in the collection of the Amer. Ent. Soc. Dr. Riley has written the life history of this species and has figured it in his reports as U. S. Entomologist.

N. lilacina Harv.*

1874. Harv., Bull. Buff. Soc. Nat. Sci., II, 119, *Mamestra.*
illabefacta Morr.
1874. Morr., Proc. Bost. Soc. N. H., XVII, 141, *Mamestra.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 211, pr. syn.
1875. Grt., Can. Ent., VII, 58, pr. syn.
1879. Grt., Can. Ent., XI, 128, pr. var.

HABITAT.—Canada; Northern, Eastern, Middle, and Central States in July; Colorado; New Mexico.

The type of the species is in the British Museum. Mr. Morrison's type is in the Tepper collection, and another, also marked "type," is in the British Museum.

M. rugosa Morr.*

1875. Morr., Proc. Bost. Soc. Nat. Hist., XVIII, 119, *Mamestra.*

HABITAT.—Maine.

M. noverca Grt.*

1878. Grt., Can. Ent., x, 236, *Mamestra.*

HABITAT.—California; Colorado, Glenwood Springs in August; Arizona; Nebraska.

The type is in the British Museum.

M. goodelli Grt.*

1875. Grt., Can. Ent., VII, 223. *Mamestra.*

HABITAT.—Canada; Northern, Eastern and Middle States; west to Nebraska; May, June, July, August.

Mr. Grote's type is in the British Museum.

M. quadrata Smith.*

1891. Smith, Proc. U. S. Nat. Mus., XIV, 248, *Mamestra.*

HABITAT.—Placer County, California; June and July.

The types are in the National Museum.

M. obscura Smith.*

1891. Smith, Proc. U. S. Nat. Mus., x, 468, *Mamestra.*

HABITAT.—Wisconsin; ? Arizona.

The type is in the Tepper collection.

M. ectypa Morr.*

1875. Morr., Proc. Bost. Soc. N. H., XVIII, 118, *Mamestra.*
bella Grt.
1883. Grt., Papilio, III, 30, *Mamestra.*
1891. Smith, Proc. U. S. Nat. Mus., XIV, 249, pr. syn.

HABITAT.—New Jersey; West Virginia.

Mr. Morrison's type is in the Meyer collection; that of Mr. Grote's species with Mr. Neumœgen.

M. renigera Steph.*

1829. Steph., Ill. Brit. Ent., Haust., II, 16, *Celæna.*
1856. Wlk., C. B. Mus., Het., x, 262 = *herbimacula.*
1869. Riley, 1st Rept. Ins. Mo., 86, f. 31, *Mamestra.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 16, *Hadena.*
1874. Grt., Can. Ent., VI, 132, *Mamestra.*
1881. Riley, Index and Supplt. to Mo. Repts., 56, *Mamestra.*
1883. Edw., Papilio, III, 133; larva.
herbimacula Gn.
1852. Gn., Spec. Gen., Noct., I, 223, *Celæna.*
1857. Wlk., C. B. Mus., Het., x, 262, *Celæna.*
1874 Grt., Bull. Buff. Soc. Nat. Sci., II, 16, pr. syn.
infecta Wlk.
1856. Wlk., C. B. Mus., Het., x, 263, *Celæna.*

HABITAT.—Canada, south to Georgia and Mississippi, west to Nebraska; Colorado; May, June, July, August, September.

The types of *infecta* and *herbimacula* are both in the British Museum. Walker's type is quite a respectable specimen and should not have been doubtful.

M. stricta Wlk.*

1865. Wlk., C. B. Mus., Het., Suppl., III, 728, *Hadena?*
1889. Butler, Trans. Ent. Soc. Lond., 1889, 386 = *Celæna egens.*
ferrea Grt.
1875. Grt., Can. Ent., VII, 25, *Mamestra.*
1881. Grt., Can. Ent., XIII, 130, *Mamestra.*
1889. Butler, Trans. Ent. Soc. Lond., 1889, 386, pr. syn.
var. **cinnabarina** Grt.*
1874. Grt., Proc. Bost. Soc. Nat. Hist., XVI, 241, *Mamestra.*

HABITAT.—California; Oregon; Washington; Vancouver, September, October.

The types of the above names are in the British Museum. Mr. Butler has referred them all as synonyms of *Celæna egens;* but *egens* is not a *Mamestra*, unfortunately; it is an *Hadena* allied in wing form to some of the smaller European forms. I have a specimen like Walker's type of *egens* from Colorado.

M. spiculosa Grt.

1883. Grt., Can. Ent., XVI, 28, *Mamestra.*

HABITAT.—Arizona.

The type is in Mr. Neumœgen's collection.

M. circumcincta Smith.

1891. Smith, Proc. U. S. Nat. Mus., XIV, 253, *Mamestra.*

HABITAT.—Sierra Nevada, California.

The type is in the Edwards collection.

M. olivacea Morr.*

1874. Morr., Proc. Bost. Soc. N. H., XVII, 143, *Mamestra.*
1875. Grt., Can. Ent., VII, 27, *Mamestra.*
1877. Grt., Bull. Geol. Surv., III, 797, *Mamestra.*
1887. Smith, Proc. U. S. Nat. Mus., X, 465, *Mamestra.*
comis Grt.
1877. Grt., Bull. Geol. Surv., III, 85, *Mamestra.*
1891. Smith, Proc. U. S. Nat. Mus., XIV, 254, pr. syn.
var. **obscurior** Smith.
1887. Smith, Proc. U. S. Nat. Mus., X, 465, *Mamestra.*

HABITAT.—Atlantic to Pacific through northern and middle United States; Colorado; July, August, September.

I do not know where the type of *olivacea* is. The type of *comis* is in the Edwards collection; that of *obscurior* is with Mrs. Fernald.

M. rectilinea Smith.*

1887. Smith, Proc. U. S. Nat. Mus., X, 465, *Mamestra.*

HABITAT.—New York; Colorado; California; Oregon; Vancouver.

The types are in the National Museum.

M. vau-media Smith.

1887. Smith, Proc. U. S. Nat. Mus., x, 466, *Mamestra.*

HABITAT.—Colorado.

The type is with Mr. J. Doll.

M. incurva Smith.

1887. Smith, Proc. U. S. Nat. Mus., x, 466, *Mamestra.*

HABITAT.—Colorado; Arizona; New Mexico.

The type is in Mr. Neumœgen's collection.

M. 4-lineata Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 140, pl. 4, f. 15, *Mamestra.*

HABITAT.—Arizona; California, February, March, April, June, August, October.

Types are in the British Museum and in the Edwards collection. .

M. marinitincta Harv.*

1875. Harv., Bull. Buff. Soc. Nat. Sci., II, 273, *Mamestra.*
1877. Harv., Bull. Buff. Soc. Nat. Sci., III, 6, *Mamestra.*

HABITAT.—Texas, October, November.

The type is in the British Museum and is the same species received by the National Museum from Belfrage under that name.

M. laudabilis Gn.*

1852. Gn., Spec. Gen., Noct., II, 30, pl. 8, f. 4, *Hecatera.*
1857. Wlk., C. B. Mus., Het., XI, 511, *Hecatera.*
1874. Grt., Proc. Bost. Soc. N. H., XVI, 241, *Mamestra.*
1875. Grt., Can. Ent., VII, 27, *Mamestra.*
indicans Wlk.
1856. Wlk., C. B. Mus., Het., x, 359, *Hapalia.*
1868. G. & R., Trans. Am. Ent. Soc., II, 78, pr. syn.
strigicollis Wallgr.
1860. Wallgr., Wien. Ent. Monatschr., IV, 170, *Hecatera.*
1891. Smith, Proc. U. S. Nat. Mus., XIV, 274, *Mamestra.*
var. **illaudabilis** Grt.*
1875. Grt., Can. Ent., VII, 27, *Mamestra.*
1881. Grt., Can. Ent., XIII, 129, *Mamestra.*

HABITAT.—New Jersey; southward and westward to Florida, Texas, and Colorado; California, April, August, September; Colorado in August.

Types of the Guenée, Grote, and Walker species are in the British Museum. I think there can be no reasonable doubt that Wallengren's species is the same.

M. alboguttata Grt.*

1877. Grt., Bull. Buff. Soc. Nat. Sci., III, 85, *Mamestra.*

HABITAT.—New Mexico; Oregon; California.

The type is in the British Museum.

M. cuneata Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 139, pl. 4, f. 9, *Mamestra.*
1874. Grt., Can. Ent., VI, 156, *Mamestra.*

HABITAT.—California; Washington; Oregon, May and June; Vancouver; New York.

The type is in the British Museum.

M. sutrina Grt.

1881. Grt., Papilio, I, 5, *Mamestra.*

HABITAT.—Colorado.

The type is in the British Museum. This species was unknown to me when I wrote my revision of *Mamestra.* It resembles *lustralis* more than it does *cuneata;* but the male antennæ are simple. In its position next to *cuneata* its resemblance to *lustralis* will serve to differentiate it.

M. lorea Gn.*

1852. Gn., Spec. Gen., Noct., I, 126, *Hydrœcia.*
1887. Wlk., C. B. Mus., Het., IX, 161, *Hydrœcia.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 13, *Mamestra.*
1879. Grt., Can. Ent., XI, 28, ? *Graphiphora.*
ligata Wlk.
1860. Wlk., Can. Nat. & Geol., V, 253, *Hydrœcia.*
1877. Grt., Can. Ent., IX, 28, pr. syn.
dodgei Grt.
1875. Grt., Can. Ent., VII, 90, *Mamestra.*
1891. Smith, Proc. U. S. Nat. Mus., XIV, 262, pr. syn.

HABITAT.—Canada; Eastern, Middle, and Central States to Nebraska, Colorado; June, July, August, September.

The type of *lorea* is in the British Museum. I have seen the type of *dodgei* in the Tepper collection. The type of *ligata* is in the collection of the Entomological Society of Ontario.

M. quadrannulata Morr.*.

1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 430, *Mamestra.*

HABITAT.—Nebraska; Texas; Colorado.

The type is in the Tepper collection. A correctly determined specimen is in the British Museum.

M. erecta Wlk.*

1856. Wlk., C. B. Mus., Het., X, 264, *Celæna.*
1891. Butler, Entomologist, XXIV, 241, *Hecatera.*
constipata Wlk.
1857. Wlk., C. B. Mus., Het., IX, 743, ? *Perigea.*
1891. Butler, Entomologist, XXIV, 241, pr. syn.
innexa Grt.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 123, *Perigrapha.*

1874. Morr., Proc. Bost. Soc. N. H., XVII, 214, *Mamestra.*
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 309, *Mamestra.*
1891. Smith, Proc. U. S. Nat. Mus., XIV, 263, pr. syn.

HABITAT.—Texas; "East Florida," March, April.

The types of all the names are in the British Museum. The locality "East Florida," is rather dubious, for I have not known of any save Texan species heretofore.

M. longiclava Smith.

1891. Smith, Proc. U. S. Nat. Mus., XIV, 265, *Mamestra.*

HABITAT.—Colorado.

The type is with Mr. Neumœgen.

M. anguina Grt.*

1881. Grt., Can. Ent., XIII, 129, *Mamestra.*

HABITAT.—Maine; New Jersey; Illinois; Nebraska; Colorado.

The type is in the British Museum.

M. vicina Grt.*

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 156, *Mamestra.*
1877. Grt., Can. Ent., IX, 197, *Mamestra.*
teligera Morr.
1874. Morr., Proc. Bost. Soc. N. H., XVII, 215, *Mamestra.*
1877. Grt., Can. Ent., IX, 197, ? pr. syn.
1881. Grt., Can. Ent., XIII, 129, pr. syn.
acutipennis Grt.
1882. Grt., Can. Ent., XII, 214, *Mamestra.*
1883. Grt., Can. Ent., XIII, 129, *Mamestra.*
1891. Smith, Proc. U. S. Nat. Mus., XIV, 267, pr. syn

HABITAT.—Maine to Texas, to California; June to October.

The types of *vicina* and *acutipennis* are in the British Museum; that of *teligera* is in the Museum of Comparative Zoölogy at Cambridge. The type of *acutipennis* is somewhat more than usually powdery; but else I find no difference from *vicina.* The specimen is badly set, giving the wings a peculiarly pointed appearance, which apparently suggested Mr. Grote's name.

M. pensilis Grt.*

1874. Grt., Proc. Acad. Nat Sci. Phil., 1874, 199, *Dianthœcia.*
1874. Grt., Can. Ent., VI, 215, *Dianthœcia.*
1881. Grt., Can. Ent., VIII, 128, *Mamestra.*

HABITAT.—Texas; Colorado; California; Washington; Vancouver, August, September, October, November.

M. ferrealis Grt.

1883. Grt., Can. Ent., XV, 29, *Mamestra.*

HABITAT.—Montana.

I have no idea where the type of this species could be found, and have not recognized it as yet.

M. impolita Morr.

1874. Morr., Proc. Bost. Soc. N. H., XVII, 140, *Mamestra.*

HABITAT.—Quebec, Canada.

The species is unknown to me. It came from Prof. F. X. Belanger, Université Laval, and he may have the type.

M. subdita Mœschl.

1860. Mœschl., Wien. Ent. Monatschr., IV, 363, pl. 9, f. 7, *Dianthœcia.*
1864. Mœschl., Wien. Ent. Monatschr., VIII, 197, pl. 5, f. 15, *Dianthœcia.*
1881. Grt., Can. Ent., XIII, 130, *Mamestra.*

HABITAT.—Labrador.

I have seen the type. It is not really typical *Mamestra*; but I have no satisfactory place for it at present and leave it where it will be most naturally sought for.

Genus **SCOTOGRAMMA** Smith.

1887. Smith, Proc. U. S. Nat. Mus., X, 469.

A revision of the species of this genus, with descriptions of each, will be found in the Proc. U. S. Nat. Mus., XII, 461, 1889.

S. submarina Grt.*

1883. Grt., Can. Ent., XV, 4, *Anarta.*
1887. Smith, Proc. U. S. Nat. Mus., X, 469, *Scotogramma.*

HABITAT.—Arizona; Montana; Oregon.

The type is with Mr. Neumoegen.

S. phoca Moeschl.

1864. Moeschl., Wien. Ent. Monatschr., VIII, 197, pl. 5, f. 15, *Dianthœcia.*
1881. Grt., Can. Ent., XIII, 130, *Mamestra.*
1887. Smith, Proc. U. S. Nat. Mus., X, 469, *Scotogramma.*
promulsa Morr.
1875. Morr., Ann. Lyc. Nat. Hist., N. Y., XI, 97, *Mamestra.*
1875. Grt., Can. Ent., VII, 22, *Anarta.*
1876. Grt., Stett. Ent. Zeit., XXXVII, 135, *Anarta.*
1881. Grt. Can. Ent., XIII, 127, *Anarta.*
1882. Smith, Bull. Bkln. Ent. Soc., V, 68, *Mamestra.*
1889. Smith, Proc. U. S. Nat. Mus., XII, 463, pr. syn.

HABITAT.—Labrador; Colorado in July and August.

Mr. Morrison's type is in the Tepper collection. Mr. Moeschler had the kindness to send me a typical specimen some years ago, which enabled me to make the comparisons resulting in the above synonymy. Material is very scant in most of the species of this genus.

S. perplexa Smith.*

1887. Smith, Proc. U. S. Nat. Mus., X, 469, *Scotogramma.*

HABITAT.—Colorado.

The type is in the Tepper collection.

S. inconcinna Smith.*

1887. Smith, Proc. U. S. Nat. Mus., x, 469, *Scotogramma.*

HABITAT.—Colorado.

The type is in the National Museum.

S. umbrosa Smith.*

1887. Smith, Proc. U. S. Nat. Mus., x, 470, *Scotogramma.*

HABITAT.—Arizona; Colorado.

Types are in the National Museum.

S. stretchii Hy. Edw.

1887. Hy. Edw., Can. Ent., XIX, 146, *Scotogramma.*
1889. Smith, Proc. U. S. Nat. Mus., XII, 464, *Scotogramma.*

HABITAT.—Colorado Desert.

The type is in the Edwards collection.

Genus **ULOLONCHE** Smith.

1887. Smith, Proc. U. S. Nat. Mus., x, 471.

A monographic treatment of the species will be found in the Proc. U. S. Nat. Mus., 1889, Vol. XII, 465. This paper is cited only to authenticate synonymy or generic reference.

U. niveiguttata Grt.

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 140, pl. 4, f. 16, *Mamestra.*
1887. Smith, Proc. U. S. Nat. Mus., x, 471, *Ulolonche.*

HABITAT.—California; Arizona.

The types are in the British Museum and in the Edwards collection.

U. fasciata Smith.*

1887. Smith, Proc. U. S. Nat. Mus., x, 471, *Ulolonche.*

HABITAT.—New Mexico.

The type is in the National Museum.

U. disticha Morr.*

1874. Morr., Proc. Bost. Soc. N. H., XVII, 217, *Caradrina.*
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 310, *Orthosia.*
1880. Grt., Bull. Bkln. Ent. Soc., III, 37, *Orthosia.*
1891. Smith, List Lepidoptera, 42, *Ulolonche.*

HABITAT.—Colorado in June; Texas.

The type is in the Museum at Cambridge; another specimen, also marked "type," is in the British Museum. The species has distinctly hairy eyes and is as little an *Orthosia* as it is a *Caradrina.*

U. modesta Morr.*

1874. Morr., Proc. Bost. Soc. N. H., XVII, 114, *Dianthœcia.*
1879. Grt., Can. Ent., XI, 27, *Graphiphora.*

1881. Grt., Can. Ent., XIII, 126. *Tæniocampa.*
1887. Smith, Proc. U. S. Nat. Mus., X, 471, *Ufoloncha.*

HABITAT.—Canada; New England, Middle, and Central States, May, June, and July.

I have seen no specimens marked "type."

U. orbiculata Smith.*

1891. Smith, Proc. U. S. Nat. Mus., XIV, 266, *Mamestra.*

HABITAT.—Colorado.

The type is in the National Museum.

Genus **HADENA** Schrank.

1804. Schrank, Fauna Boica, II, 2, 158.

This genus will probably stand subdivision into several genera. Two rather well-marked groups, or subgenera, *Xylophasia* and *Luperina*, have been monographed by me in the Proc. U. S. Nat. Mus., 1890, Vol. XIII, pp. 407–447, and this paper is not cited save when necessary to authenticate a change. It is likely that, eventually, both of these subdivisions will take generic rank, and the term *Hadena* will probably be restricted to one of them. The species not included in the above revision are for the present placed into a section *Hadena* merely to separate them. As usual, unless otherwise stated, my identification of the species was correct.

§ **LUPERINA** Bdv.

1829. Bdv., Index Methodicus.

L. niveivenosa Grt.*

1879. Grt., Bull. Geol. Surv., V, 206. *Agrotis.*
1890. Smith, Proc. U. S. Nat. Mus., XIII, 410, *Luperina.*

HABITAT.—Montana; Colorado.

The type is with Mr. Graef, and a considerable number of specimens indicate quite a variable species. Curiously enough I have never seen a male.

L. stipata Morr.*

1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 64, *Hadena.*

HABITAT.—Illinois; Massachusetts; Maine; Minnesota; Wisconsin; Colorado.

The type is in the Tepper collection.

L. passer Gn.*

1852. Gn., Spec. Gen., Noct., I, 195, *Mamestra.*
1856. Wlk., C. B. Mus., Het., IX, 231, *Mamestra.*
1879. Grt., Can. Ent., XI, 179, *Hadena.*
1882. Grt., New List, 27, *Luceria.*
incallida Wlk.
1856. Wlk., C. B. Mus., Het., X, 330, *Agrotis.*

1869. G. & R., Trans. Am. Ent. Soc., II, 78 = *Agrotis venerabilis.*
1889. Butler, Trans. Ent. Soc. Lond., 1889, 377 = *Agrotis venerabilis.*
loculata Morr.
1874. Morr., Bull. Buff. Soc. N. H., II, 110, *Luceria.*
1879. Grt., Can. Ent., XI, 179, pr. syn.
viralis Grt.
1880. Grt., Bull. Geol. Surv., VI, 260, *Agrotis.*
1890. Smith, Bull. U. S. Nat. Mus., No. 38, 207, *Agrotis.*
var. **conspicua** Morr.
1874. Morr., Bull. Buff. Soc. Nat. Sci., II, 110, *Luceria.*

HABITAT.—Canada, June and July; Massachusetts, June and July; Connecticut; New York, July, August, and September; Illinois, October; Colorado; Oregon.

The types of *passer*, *incallida*, and *viralis* are in the British Museum; those of *loculata* and *conspicua* are in the Tepper collection: a specimen of *loculata* also marked "type" is in the British Museum. Mr. Walker's type is a badly rubbed specimen, undoubtedly the same as *passer.* I can not understand how both Mr. Grote and Mr. Butler could see any resemblance to *venerabilis*, and at all events the structural characters should have prevented the reference. Mr. Grote's type of *viralis* is a badly faded and discolored specimen, also without doubt the same as *passer.* In the Cambridge Museum is a specimen of this same species marked "*Hadena destructor* Peck," in Mr. Grote's handwriting.

L. burgessi Morr.

1874. Morr., Bull. Buff. Soc. Nat. Sci., II, 109, *Luceria.*
1875. Grt., Check List, Noct., *Hadena.*
1880. Grt., Bull. Bkln. Ent. Soc., III, 36, *Hadena.*
1882. Grt., New List, 27, *Luceria.*
discors Grt.
1881. Grt., Trans. Kans. Ac. Sci., VII, 65, *Hadena.*
1890. Smith, Proc. U. S. Nat. Mus., XIII, 412, pr. syn.

HABITAT.—Massachusetts; Arizona; Nebraska.

The type of Mr. Morrison's species is in Mr. Tepper's collection.

L. longula Grt.●

1879. Grt., Bull. Geol. Surv., V, 204, *Hadena.*

HABITAT.—New Mexico; Colorado; Nevada; Kansas; Washington.

Mr. Grote's type is in the British Museum.

§ **XYLOPHASIA** Steph.

1829. Steph., Ill. Br. Ent., Haust., II, 174.

X. remissa Hbn.*

1812. Hbn., Samml. Eur. Schmett., Noct., 423, *Noctua.*
1816. Hbn., Verzeichniss, 219, *Astrapetis.*
1852. Gn., Spec. Gen., Noct., I, 208, an var. *gemina.*
indocilis Wlk.
1856. Wlk., C. B. Mus., Het., IX, 178, *Xylophasia.*

1882. Grt., Ill. Essay, 44, pr. syn.
1889. Butler, Trans. Ent. Soc. Lond., 1889, 386, pr. syn.

HABITAT.—Middle and Eastern States; North Carolina; New York in June.

Walker's type is in the British Museum, and is this species of Hübner's.

X. separans Grt.

1880. Grt., Bull. U. S. Geol. Surv., VI, 260, *Hadena.*
1890. Smith, Proc. U. S. Nat. Mus., XIII, 125 = *ducta.*

HABITAT.—New York in June and July; Wisconsin.

The type is in the British Museum. I find I had entirely mistaken this species. It has nothing to do at all with *ducta* nor with the *devastatrix* group, in fact, but belongs with the *vultuosa* series. It is a very close ally in maculation to *remissa*, or yet nearer to the European *gemina*, but much darker and with all the pale markings wanting. The W-mark in the s. t. line is distinct, the orbicular oblique, and there is a broad dash between the ordinary lines. I can not at present remember where I obtained the specimens marked *separans*, which led to my erroneous reference.

X. suffusca Morr.*

1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 61, *Hadena.*
1877. Grt., Can. Ent., IX, 29 = *Agrotis illata.*
illata ‡ Grt.
1876. Grt., Can. Ent., VIII, 29, *Hadena.*
1877. Grt., Can. Ent., IX, 29, *Hadena.*

HABITAT.—Canada to Texas; Colorado, August; New York, May, June, July, September; Massachusetts in August.

Mr. Grote has referred this species, the type of which is in the Tepper collection, to *illata* Wlk.; but that species is really an *Agrotid*, as described by Mr. Walker, and is the *cinereomaculata* form of *turris.* There is a vague sort of resemblance between the species, but an examination of the generic characters should have prevented the reference.

X. apamiformis Gn.*

1852. Gn., Spec. Gen., Noct., I, 137, *Xylophasia.*
1856. Wlk., C. B. Mus., Het., IX, 176, *Xylophasia.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 109, *Hadena.*
contenta Wlk.
1857. Wlk., C. B. Mus., Het., XI, 754, *Hadena.*
1868. G. & R., Trans. Am. Ent. Soc., II, 78, pr. syn.

HABITAT.—Canada, June and August; New York, June, July, and August; New Jersey; Pennsylvania; Illinois; Colorado; District of Columbia, in June.

Both the Guenée and the Walker types are in the British Museum.

X. vultuosa Grt.*

1875. Grt., Proc. Ac. Nat. Sci. Phil., 1875, 420, *Hadena*.

HABITAT.—Canada; Northern, Eastern, Middle, and Central States; New York in May and June; Massachusetts in August.

The type is in the British Museum.

X. exornata Moeschl.

1864. Moeschl., Wien. Ent. Monatschr., IV, 364, pl. 9, f. 5, *Hadena*.
1867. Pack., Proc. Bost. Soc. N. H., XI, 39, *Hadena*.

HABITAT.—Labrador; Colorado, Glenwood Springs, August.

I have seen a typical specimen from Mr. Moeschler. In the British Museum there are two specimens erroneously named; but one from the Grote collection is correctly determined.

H. morna Strk.*

1879. Strk., Rept. Chief Eng., 1878–'79, v. V, p. 1861, *Hadena*.
1890. Smith, Proc. U. S. Nat. Mus., XIII, 422, *Xylophasia*.

HABITAT.—"Rio Blanco"; Colorado.

The type is in Mr. Strecker's collection.

I have identified this species in Mr. Bruce's material, and find its best position here.

X. hulstii Grt.*

1880. Grt., No. Am. Ent., I, 93, *Hadena*.

HABITAT.—Colorado.

The type is in the Graef collection. Mr. Bruce has, during 1891, taken the species in small numbers.

X. finitima Gn.*

1852. Gn., Spec. Gen., Noct., I, 206, *Apamea*.
1856. Wlk., C. B. Mus., Het., IX, 250, *Apamea*.
1875. Speyer, Stett. Ent. Zeit., XXXVI, 150, an var. *basilinea*.
1878. Graef, Bull. Bkln. Ent. Soc., I, 9, an var. *basilinea*.
1882. Grt., New List, 1882, 27, *Hadena*.

HABITAT.—Canada; Northern, Middle, and Eastern States in May and June; Colorado; Oregon, May.

The type is in the British Museum.

X. lateritia Hfn.*

1767. Hfn., Berlin. Mag., III, 306, *Noctua*.
1776. Rott., Naturf., IX, 127, *Noctua*.
1816. Hbn., Verzeichniss, 243, *Septis*.
1852. Gn., Spec. Gen., Noct., I, 137, *Xylophasia*.
1856. Wlk., C. B. Mus., Het., IX, 170, *Xylophasia*.
1874. Grt., Can. Ent., VI, 215, *Hadena*.

molochina Hbn.

1812. Hbn., Samml. Ex. Schmett. Noct., 74, *Noctua*.

1816. Hbn., Verzeichniss, 213, pr. syn.
obliviosa Wlk.
1858. Wlk., C. B. Mus., Het., xv, 1683, *Mamestra.*
1891. Smith, Proc. U. S. Nat. Mus., xiv, *Mamestra.*

HABITAT.—Europe; United States; Canada in July; New York, July and August; Colorado. October.

Walker's type is in the British Museum, and is what we know as *lateritia.* On the other hand, both *insignata* and *dubitans* Wlk., do not agree with *lateritia*, but are exactly the same as Mr. Grote's *sputatrix. Insignata* has been referred to both species at different times by Mr. Grote.

X. cogitata Smith.*

1890. Smith, Proc. U. S. Nat. Mus., xiii, 421, *Xylophasia.*
insignata || Wlk.
1860. Wlk., Can. Nat. and Geol., v, 254, *Apamea.*

HABITAT.—Sierra Nevada, California; Colorado, Manitou in June and September; Canada, in July; New Hampshire.

Types are in the National Museum, at Rutgers College and in the Neumœgen collection. The type of Walker's *insignata* described in the Can. Nat. and Geol., I owe to the courtesy of Mr. Moffat, curator for the Entomological Society of Ontario. It is a very poor specimen, but undoubtedly the species described by me. Fortunately Walker had preoccupied the name in 1857 for a closely allied species.

X. dubitans Wlk.*

1856. Wlk., C. B. Mus., Het., ix, 232, *Mamestra.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., i, 108, *Hadena.*
1874. Grt., Can. Ent., vi, 215 = *lateritia.*
1875. Speyer, Stett. Ent. Zeit., xxxvi, 146, an var. *lateritia.*
insignata Wlk.
1857. Wlk., C. B. Mus., Het., xi, 729, *Apamea.*
1868. G. & R., Trans. Am. Ent. Soc., ii, 78=*lateritia.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., i, 108=*lateritia.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., i, 190, n. b. l.
sputatrix Grt.
1873. Grt., Bull. Buff. Soc. Nat. Sci., i, 190, *Hadena spatator.*
1875. Grt., Check List Noct., 9, *Hadena sputatrix.*

HABITAT.—Canada; Eastern, Northern, Central, and Middle States, July, August, September.

The types of all the names are in the British Museum, and the type of *dubitans* is undoubtedly the same as *sputatrix* and not like *lateritia.* The question of whether this *insignata* should be considered a *nomen bis lectum* need not be decided under the circumstances.

X. plutonia Grt.

1883. Grt., Can. Ent., xv, 9, *Hadena.*

HABITAT.—Maine; Wisconsin.

The type is in Dr. Thaxter's collection. The *plutonia* of the British Museum collection is an *Agrotis pastoralis.*

X. alticola Smith.

1890. Grt., Proc. U. S. Nat. Mus., XIII, 423, *Xylophasia.*

HABITAT.—Gibson Mountains, Colorado, 12,500 feet.

The type is in the National Museum.

X. ducta Grt.*

1878. Grt., Bull. Geol. Surv., IV, 176, *Hadena.*

HABITAT.—Maine; Canada; New York; Washington.

The type is in the British Museum, and is the species I know as such. Dr. Bethune sent me a specimen marked *insulsa* by Walker; but the type of *insulsa* is *Carneades campestris.*

X. impulsa Gn.*

1852. Gn., Spec. Gen., Noct., I, 194, *Mamestra.*
1856. Wlk., C. B. Mus., Het., IX, 231, *Mamestra.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 108, *Hadena.*
var. **mixta** Grt.
1880. Grt., Bull. Geol. Surv., VI, 264, *Hadena.*

HABITAT.—Canada in July and August. Eastern and Middle States June and July; Texas.

Mr. Grote's types are in the British Museum. The variety *mixta* has the reniform somewhat pale marked, and the specimen is a little rubbed so as to show a yellowish ground. Else it does not differ from the type form.

X. devastatrix Brace.*

1819. Brace, Am. Journ. Sci., I, 154, *Phalæna.*
1856. Fitch, Rept. Ins., N. Y., 315, pl. 3, f. 2, *Agrotis.*
1862. Harris, Inj. Ins., Flint ed., 145, *Agrotis.*
1869. Riley, 1st Rept. Ins. Mo., 83, *Agrotis.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 108, *Hadena.*
1875. Speyer, Stett. Ent. Zeit., XXXVI, 147, *Hadena.*
1878. Grt., Bull. Geol. Surv., IV, 178, *Hadena.*
1881. Riley, Index and Suppl. to Mo. Repts., 56, *Hadena.*
1883. Saund., Fruit Insects, 329, f. 341, 342, *Hadena.*
abjecta var. ‡ Gn.
1852. Gn., Spec. Gen., Noct., I, 194, *Mamestra.*
1875. Speyer, Stett. Ent. Zeit., XXXVI, 147, *Hadena.*
ordinaria Wlk.
1856. Wlk., C. B. Mus., Het., IX, 232, *Mamestra.*
1868. G. and R., Trans. Am. Ent. Soc., II, 77, pr. syn.
1882. Grt., Ill. Essay, 43, pr. syn.
contenta Wlk.
1856. Wlk., C. B. Mus., Het., IX, 233, *Mamestra.*
1882. Grt., Ill. Essay, 43, pr. syn.
marshallana Westw.
1857. Humph., British Moths, I, 122, *Agrotis.*
1858. Wlk., C. B. Mus., Het., XIV, 1698 = *contenta.*

HABITAT.—United States and Canada, June to September.

Walker's types are in the British Museum and have been correctly referred by Mr. Grote. The reference to *marshallana* is after Walker.

The economic literature of the species is large, and is given in great part by Mr. Edwards in his catalogue of early stages.

X. exulis Lef.*

1836. Lef., Ann. Soc. Ent. Fr., V, 393, pl. 10, f. 2, *Hadena*.
1852. Gn., Spec. Gen., Noct., I, 185, *Crymodes*.
1856. Wlk., C. B. Mus., Het., IX, 220, *Crymodes*.
gelata Lef.
1836. Lef., Ann. Soc. Ent. Fr., V, 393, pl. 10, f. 3, *Hadena*.
1852. Gn., Spec. Gen., Noct., I, 185, *Crymodes*.
1856. Wlk., C. B. Mus., Het., IX, 220, *Crymodes*.
grœnlandica Zett.
1839. Zett., Ins. Lapp., 939, *Hadena*.
1845. H. Sch., Schmett. Eur., II, 274, 281, pl. 31, *Polia*.
1852. Gn., Spec. Gen., Noct., I, 185, *Crymodes*.
1856. Wlk., C. B. Mus., Het., IX, 219, *Crymodes*.
marmorata Zett.
1839. Zett., Ins. Lapp., 937, *Hadena*.
1845. H. Sch., Schmett. Eur., II, pl. 451, *Polia*.
1856. Wlk., C. B. Mus., Het., IX, 220 = *poli*.
difflua Geyer.
1837. Geyer, Zutr. Hbn. Samml. Ex., 9, ff., 821, 822, *Exarnis*.
1871. Staud., Cat. Lep., 100 = *exulis*.
1881. Grt., Can. Ent., XIII, 91, = *exulis*.
gelida Gn.
1852. Gn., Spec. Gen., Noct., I, 186, pl. IV, f. 7, *Crymodes*.
1856. Wlk., C. B. Mus., Het., IX, 221, *Crymodes*.
poli Gn.
1852. Gn., Spec. Gen., Noct., I, 187, *Crymodes*.
1856. Wlk., C. B. Mus., Het., IX, 220, *Crymodes*.
borea Gn.
1852. Gn., Spec. Gen., Noct., I, 186, *Crymodes*.

HABITAT.—Labrador; Greenland; Iceland.

The synonymy is from Staudinger in great part, and his catalogue should be consulted for references to European literature. In the Jardin des Plantes at Paris is a long series of specimens separated out by Guenée and containing types of his names. They all refer to one species.

X. sommeri Lef.

1836. Lef., Ann. Soc. Ent. Fr., III, 391, pl. 10, f. 1, *Hadena*.
1852. Gn., Spec. Gen., Noct., I, 187, *Crymodes*.
1856. Wlk., C. B. Mus., Het., IX, 220, *Crymodes*.

HABITAT.—Labrador; Greenland; Iceland.

Mr. Mœschler kindly sent me a specimen for study years ago, and I have seen none since.

X. arctica Bdv.*

1840. Bdv., Gen. et Ind. Meth., 120, *Hadena*.
1845. H. Sch., Schmett. Eur., II, 272, pl. 31, f. 155, *Polia*.
1852. Gn., Spec. Gen., Noct., I, 193, *Mamestra*.
1856. Wlk., C. B. Mus., Het., IX, 225, *Mamestra*.
1869. Minot, Can. Ent., II, 28, *Mamestra*.

1870. Saund., Can. Ent., II, 75, *Mamestra.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 14, *Hadena.*
amputatrix Fitch.
1856. Fitch, 3d Rept. Ins. N. Y., 425, *Hadena.*
1869. Riley, 1st Rept. Ins. Mo., 87, *Hadena.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 108, pr. syn.
amica ‡ Harr.
1862. Harr., Inj. Ins., Flint ed., 450, f. 222, *Hadena.*
1873. Grt., Proc. Bost. Soc. N. H., XVI, 241, pr. syn.

HABITAT.—United States east of the Rocky Mountains; New Mexico; Colorado, June to September.

X. albina Grt.

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 157, *Hadena.*
1881. Grt., Bull. U. S. Geol. Surv., VI, 263, an var. *castanea.*

HABITAT.—California.

The "type" is in the British Museum; but I am not sure it is a fair representative of the species Mr. Grote meant to describe. It seems to be really a form of *castanea*, as Mr. Grote suggested; but the specimen in the Tepper collections, also marked "type" by Mr. Grote, is more nearly allied to *arctica*, and is a good species as shown in my Revision. I prefer still to consider the form described by me as the species intended by Mr. Grote, the more so as I could not by comparison of the sexual characters of the British Museum "type" decide the question positively.

X. pluviosa Wlk.

1865. Wlk., C. B. Mus., Het., XXXIII, 725, *Eurois.*
castanea Grt.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 156, *Hadena.*
cymosa Grt.
1881. Grt., Papilio, I, 34, *Hadena.*
1881. Grt., Papilio, I, 59 = *castanea.*
1881. Grt., Bull. Geol. Surv., VI, 263 = *castanea.*

HABITAT.—California in April and May; Washington; Vancouver.

The types of all the names are in the British Museum. Mr. Walker's *pluviosa* is exactly like *castanea.* Another "type" of *castanea* is in the Tepper collection.

X. occidens Grt.*

1878. Grt., Bull. U. S. Geol. Surv., IV, 177, *Hadena.*

HABITAT.—Nevada; Colorado, August; Sierra Nevada, California.

The type is in the British Museum.

X. perpensa Grt.

1883. Grt., Can. Ent., XIII, 229, *Hadena.*

HABITAT.—Arizona; New Mexico.

The type is in Mr. Neumœgen's collection.

X. cuculliformis Grt.

1875. Grt., Check List Noct., 21, *Hadena*.

Habitat.—California.

The type is in the British Museum.

X. verbascoides Gn.*

1852. Gn., Spec. Gen., Noct., I, 141, *Xylophasia*.
1856. Wlk., C. B. Mus., Het., IX, 177, *Xylophasia*.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 109, *Hadena*.

Habitat.—Middle, Eastern, and Central States, June and July.

The type is in the British Museum.

X. nigrior Smith.

1890. Smith, Proc. U. S. Nat. Mus., XIII, 437, *Xylophasia*.

Habitat.—Maine.

The type is with Dr. Thaxter.

X. cariosa Gn.*

1852. Gn., Spec. Gen., Noct., I, 144, *Xylophasia*.
1856. Wlk., C. B. Mus., Het., IX, 178, *Xylophasia*.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 109, *Hadena*.
1874. Grt., Can. Ent., VI, 15, *Hadena*.
idonea Grt.
1882. Grt., Can. Ent., XIV, 18, *Hadena*.
1890. Smith, Proc. U. S. Nat. Mus., XIII, 438, *Xylophasia*.

Habitat.—Maine to Texas; Wisconsin; Arizona; Northern States, June and July.

The types of both names are in the British Museum, and are undoubtedly the same species, much to my surprise. The *cariosa* type is a dark form of what I have always labeled with the same name; but the *cariosa* of the Grote collection is what I have supposed was *idonea*. I am the more surprised at this as my original knowledge of Guenée's species was based upon specimens labeled by Mr. Grote. I had supposed *idonea* to be the western representative of *cariosa*. I find now that there are probably two species covering the same range. Mr. Grote seems to have realized the same fact; but in separating them he unfortunately selected as type exactly the same form described by Guenée. The matter needs further study. I had no males of "*idonea*" before me when I wrote, and therefore can not be sure that the characters given by me authorize a new specific name.

X. vulgaris G. & R.*

1866. G. & R., Proc. Ent. Soc. Phila., VI, 19, pl. 3, f. 2, *Xylophasia*.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 110, *Hadena*.
1874. Grt., 6th Rept. Peab. Ac. Sci., 32,=*Xylina socia*.

Habitat.—Middle and Eastern States; District of Columbia, May, June, and July.

A specimen marked "type," by Mr. Grote, is in the British Museum.

X. cristata Grt.

1878. Grt., Bull. Geol. Surv., IV, 176, *Hadena.*

HABITAT.—Buffalo, New York.

The type is in the British Museum. It is a *vulgaris* of large size and with a reddish-yellow suffusion. It may be a good species, but is more probably an aberration. It will need a large material from the locality to decide.

X. antennata Smith.*

1890. Smith, Proc. U. S. Nat. Mus., XIII, 439, *Xylophasia.*

HABITAT.—California.

The type is in the National Museum.

X. relecina Morr.

1874. Morr., Proc. Bost. Soc. N. H., XVII, 216, *Hadena.*
1882. Grt., New List, 27, *Luceria.*

HABITAT.—Texas; Glenwood Springs, Colorado, in October.

The type is in the Museum of Comparative Zoölogy at Cambridge.

X. cinefacta Grt.

1881. Grt., Papilio, I, 77, *Hadena.*

HABITAT.—Washington; California; Colorado.

The types are in the British Museum and in the Edwards collection.

X. centralis Smith.*

1890. Smith, Proc. U. S. Nat. Mus., XIII, 441, *Xylophasia.*

HABITAT.—Sierra Nevada, California.

Types are in the National Museum and in the Edwards collection.

X. auranticolor Grt.

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 109, *Hadena.*

HABITAT.—Colorado; New Mexico; Washington, July 10, 8,000 feet; Oregon, May and June; Arizona; Nebraska, in August.

A specimen, not marked "type," is in the British Museum.

X. lignicolor Gn.

1852. Gn., Spec. Gen., Noct., I, 140, *Xylophasia.*
1856. Wlk., C. B. Mus., Het., IX, 176, *Xylophasia.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 109, *Hadena.*
1875. Speyer, Stett. Ent. Zeit., XXXVI, 149, *Hadena.*
1879. Strk., Rept. Chief Eng., 1878–79, V, 1861, *Hadena.*
var. **quæsita** Grt.
1876. Grt., Can. Ent., VIII, 26, *Hadena.*
1877. Grt., Can. Ent., IX, 197, pr. syn.

HABITAT.—Canada: Northern, Eastern, Middle, and Western States; Arizona; Colorado; Northern and Middle States, June, July, August.

The types of both species and variety are in the British Museum.

X. genialis Grt.*

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 66, *Hadena.*

Habitat.—California.

The type is in the British Museum.

X. inordinata Morr.*

1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 63, *Hadena.*
var. **montana** Smith.
1890. Smith, Proc. U. S. Nat. Mus., XIII, 414, *Xylophasia.*

Habitat.—Massachusetts, in June; Maine; Colorado.

Mr. Morrison's type is in the Tepper collection, and is from the east; my type is in the National Museum, and is from Colorado.

X. semilunata Grt.*

1881. Grt., Papilio, I, 58, *Hadena.*

Habitat.—Washington; Colorado.

The type is in the British Museum.

§ **HADENA** Schrank.

The groupings are only approximate, and the sequence of species is very defective.

H. evelina French.*

1888. French, Can. Ent., XX, 71, *Hadena.*

Habitat.—California, Truckee, Shasta County, Sierra Nevada, in September; Glenwood Springs, Colorado, October.

The type is with Prof. French, who has kindly sent me a duplicate.

H. bridghami G. & R.*

1866. G. & R., Proc. Ent. Soc. Phil., VI, 17, pl. 3, f. 1, *Mamestra.*
1873. Grt., Bull. Buff. Nat. Sci., I, 108, *Hadena.*

Habitat.—Eastern States; Massachusetts, in July.

A specimen labeled by Mr. Grote, but apparently not the type, is in the British Museum. I have no idea where the type is; but as the species is so very distinct and generally known, it is not a matter of serious importance.

H. transfrons Neum.

1883. Neum., Papilio, III, 139, *Hadena.*

Habitat.—British Columbia.

The type is in Mr. Neumœgen's collection.

H. violacea Grt.

1881. Grt., Bull. Geol. Surv., VI, 261, *Hadena.*

Habitat.—California, Shasta County, Sierra Nevada; Colorado, in October.

The types are in the British Museum and in the Edwards collection.

H. leucoscelis Grt.*

1874. Grt., 6th Rept. Peab. Ac. Sci., 26, *Polia.*
1875. Grt., Check List Noct., 9, *Hadena.*
fibulata Morr.
1874. Morr., Bull. Buff. Soc. Nat. Sci., II, 112, *Dryobola.*
1875. Morr., Can. Ent., VII, 216, *Hadena.*
1875. Grt., Check List Noct., 9, pr. syn.
1880. Grt., Bull. Geol. Surv., VI, 265, pr. syn.

HABITAT.—Canada; Maine; Massachusetts, in July; Northern New York, in August; Wisconsin; Colorado.

Mr. Grote's type is in the British Museum. I have seen Mr. Morrison's type in some collection, and it is this species.

H. claudens Wlk.*

1857. Wlk., C. B. Mus., Het., XI, 753, *Hadena.*
hillii Grt.
1876. Grt., Ann. Lyc. Nat. Hist. N. Y., XI, 305, *Hadena.*

HABITAT.—New Foundland; Northern and Eastern States; Lewis County, New York, July.

Walker's type is in the British Museum, in which is also a specimen of Mr. Grote's species. The two names refer to the same form; Mr. Grote's type is in the Hill collection.

H. adnixa Grt.

1880. Grt., Can. Ent., XII, 243, *Hadena.*

HABITAT.—Nevada.

Types are in the British Museum and in the Tepper collection.

H. paviæ Behr.*

1874. Behr, in Strk. Lep. Rhop. et Het., 94, *Tæniocampa.*
1881. Grt., Bull. Geol. Surv., VI, 266=*curvata.*

HABITAT.—California.

Types are in Dr. Strecker's collection. In the British Museum are two specimens received from Mr. Hy. Edwards and labeled by him *Dryobota paviæ* Behr. They look like an evenly colored *curvata*, without contrasts of color. I believe the species to be a good one, and have named it *inconspicua* in the National Museum and in Mr. Edwards's collection. The name has not been sanctioned by description; but it appears in my List of Lepidoptera, No. 2034.

H. binotata Wlk.*

1865. Wlk., C. B. Mus., Het., XXXII, 663, *Mamestra.*
1882. Grt., Ill. Essay, 43, *Hadena.*
curvata Grt.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 157, *Hadena.*
1882. Grt., Ill. Essay, 43, pr. syn.
detersa Wlk.
extersa Wlk.
1865. Wlk., C. B. Mus., Het., XXXIII, 728, *Hadena.*

HABITAT.—California; Washington; Vancouver.

The types of all these names are in the British Museum, and all refer to the same species. I can find no description of *detersa* Wlk., and it is possible that this is a *lapsus calami* for *extersa.*

H. genetrix Grt.

1878. Grt., Can. Ent., x, 237, *Hadena.*

HABITAT.—Nevada; Colorado.

The type is in the British Museum, and resembles a powdery *binotata* with all the maculation obscure.

H. characta Grt.*

1880. Grt., Can. Ent., XII, 243, *Hadena.*
1881. Grt., Bull. Geol. Surv., VI, 261, *Hadena.*

HABITAT.—Nevada; Arizona.

The type is in the British Museum; another typical specimen is in the Tepper collection, whence the type was received.

H. fumosa Grt.*

1879. Grt., Bull. Geol. Surv., v, 205, *Hadena.*

HABITAT.—Colorado; Washington.

The type is in the British Museum. I have a specimen compared with it.

H. indirecta Grt.*

1875. Grt., Can. Ent., VII, 28, *Hadena.*

HABITAT.—Colorado; California; Utah; Washington; Vancouver; British Columbia.

The type is in the British Museum.

H. divesta Grt.*

1874. Grt., Can. Ent., VI, 215, *Hadena.*
1875. Grt., Can. Ent., VII, 28, *Hadena.*

HABITAT.—Colorado; California; Washington; Vancouver, August.

The type is in the British Museum.

H. tusa Grt.

1878. Grt., Bull. Geol. Surv., IV, 177, *Hadena.*

HABITAT.—California.

The type is in the British Museum. It is a somewhat peculiar, broad-winged species, with prominent tuftings, and has a vague resemblance to *Euplexia.* The hind angles of the primaries are retracted, the margins of secondaries even.

H. tonsa Grt.

1880. Grt., Can. Ent., XII. 214, *Hadena.*

HABITAT.—Nevada.

The type is in the British Museum. It is a small, frail species, of the size of *modiola*, of which it is an ally. It is much more powdery and more ashen gray.

H. semicana Wlk.

1865. Wlk., C. B. Mus., Het., XXXII, 675, *Miana.*
latireptana Wlk.
1865. Wlk., C. B. Mus., Het., XXXIII, 791, ? *Erastria.*
modiola Grt.
1879. Grt., Bull. Geol. Surv., V, 204, *Hadena.*

HABITAT.—Wisconsin; "North America"; Colorado.

The types of the Walker and Grote names are in the British Museum, and all refer to the same species. Mr. Grote first compared his species to *modica* and afterward placed it next to *fractilinea*, of which I placed it as a variety in my list. It resembles exactly that species with all the red taken out. I have separated it here tentatively and for convenience in giving the synonymy.

H. fractilinea Grt.*

1874. Grt., Can. Ent., VI, 15, *Hadena.*
vulviraga Morr.
1874. Morr., Proc. Bost. Soc. N. H., XVII, 144, *Hadena.*

HABITAT.—Canada, in August; New York, in August; Illinois; Vermont; Wisconsin; Nebraska; Colorada; New Mexico.

Mr. Morrison's type is in the Tepper collection. Mr. Grote's type I have not seen. It does not seem to be in the British Museum, but I may have overlooked it. I have, however, seen a number of specimens named by Mr. Grote, and there is no doubt that Mr. Morrison's species is the same.

H. misera Grt.*

1881. Grt., Bull. Geol. Surv., VI, 582, *Hadena.*

HABITAT.—Illinois; New York, in August; Wisconsin.

The type is with Mr. Neumoegen.

H. egens Wlk.

1856. Wlk., C. B. Mus., Het., X, 263, *Celæna.*
1882. Grt., Ill. Essay, 45, *Celæna.*
1889. Butler, Trans. Ent. Soc. Lond., 386 = *Mamestra ferrea.*

HABITAT.—Hudson Bay Territory; Colorado.

Mr. Butler is in error in referring this species to *Mamestra stricta* Wlk., = *ferrea* Grt. It is not a *Mamestra* at all, but a *Hadena*, and the type, though a poor specimen and badly rubbed, is like an insect I have had from Colorado, collected by Bruce. It is a good species.

H. minuscula Morr.

1874. Morr., Proc. Bost. Soc. N. H., XVII, 147, *Orthosia.*
1875. Grt., Proc. Ac. Nat. Sci. Phil., 1875, 425, *Parastichtis.*
1875. Grt., Can. Ent., VII, pl. I. f. 3, *Parastichtis.*
1875. Morr , Proc. Ac. Nat. Sci. Phil., 1875, 431, *Hadena.*

HABITAT.—Canada, in September; Massachusetts, in August and September; Maine; New Hampshire.

The type is in the Tepper collection.

H. marina Grt.

1871. Grt., Bull. Buff. Soc. Nat. Sci., II, 67, *Hadena.*

HABITAT.—California.

The type is in the British Museum. It is a smaller, narrower winged form, but with all the maculation much as in *miseloides.*

H. miseloides Gn.*

1852. Gn., Sp. Gen., Noct., II, 89, *Hadena.*
1853. H. Sch., Ex. Schmett., 212, *Hadena.*
1857. Wlk., C. B. Mus., Het., XI, 582, *Hadena.*

HABITAT.—United States, east of the Rocky Mountains; New York, in July; District of Columbia, in August; Texas, May and September.

The type is in the British Museum.

H. chlorostigma Harv.

1876. Harv., Can. Ent., VIII, 53, *Hadena.*

HABITAT.—Texas, May 22; Illinois.

The type is in the British Museum. It is yet smaller than *marina,* the reniform green; orbicular small and round; the lines white marked.

H. smaragdina Neum.

1883. Neum., Papilio, III, 110, *Hadena.*

HABITAT.—Southwest Arizona.

The type is in the Neumægen collection.

H. mactata Gn.*

1852. Gn., Spec. Gen., Noct., I, 207, *Apamea.*
1856. Wlk., C. B. Mus., Het., IX, 250, *Apamea.*
1874. Grt., Trans. Am. Ent. Soc., V, 91, *Hadena.*

HABITAT.—Canada, July, August, and September; Northern, Eastern, and Middle States, same dates; Colorado.

The type is in the British Museum.

H. turbulenta Hbn.*

1820. Hbn., Zuträge, pl. 15, ff. 67, 68, *Phosphila.*
1857. Wlk., C. B. Mus., Het., XIII, 1018, *Amphipyra.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 180, *Hadena.*
1888. Beutenmüller, Can. Ent., XX, 136, larva.
1892. Edw. and Elliott, Bull. Am. Mus., N. H., IV, 77, larval habits.
arcuata Wlk.
1857. Wlk., C. B. Mus., Het., XI, 718, *Xylophasia.*

HABITAT.—New York, southward; Delaware in May; Georgia; Florida; Middle States, August and September.

Walker's type in the British Museum is an unusually large specimen of Hübner's species.

H. modica Gn.*

1852. Gn., Spec. Gen., Noct., I, 207, *Apamea.*
1856. Wlk., C. B. Mus., Het., IX, 250, *Apamea.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 15, *Hadena.*
subcedens Wlk.
1856. Wlk., C. B. Mus., Het., X, 264, *Celæna.*
1868. G. & R., Trans. Am. Ent. Soc., II, 78, pr. syn.
1889. Butler, Trans. Ent. Soc. Lond., 1889, 386, pr. syn.

HABITAT.—Canada; Eastern, Middle, and Central States, July to September; Colorado.

Guenée's type is probably in the Oberthür collection. Walker's is of course, in the British Museum.

H. hausta Grt.

1882. Grt., Can. Ent., XIV, 217, *Hadena.*

HABITAT.—Kittery Point, Maine; Northern New York; New Mexico.

The type is in Dr. Thaxter's collection.

H. cylindrica Grt.*

1880. Grt., Can. Ent., XII, 214, *Hadena.*

HABITAT.—Nevada.

The type is in the British Museum. It is a fragile thing, with slight body and large wings. Mr. Butler has placed it under *Bryophila.* It is more like Mr. Grote's *Hadenella.*

H. patina Harv.*

1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 7, *Hadena.*

HABITAT.—Texas, March and April; District of Columbia, August and September.

The type is in the British Museum, and is like the specimens from the Belfrage collection in the National Museum.

H. diversicolor Morr.*

1874. Morr., Proc. Bost. Soc. N. H., XVII, 132, *Demas.*
1875. Grt., Proc. Ac. Nat. Sci. Phil., 1875, 419, *Hadena.*
1876. Grt., Stett. Ent. Zeit., XXXVII, 136, *Hadena.*
1880. Grt., Bull. Bkln. Ent. Soc., III, 37, *Hadena.*

HABITAT.—Massachusetts, August and September; New York; New Hampshire.

The type is in the Tepper collection; another specimen in the British Museum is also marked "type."

H. tortilis Grt.

1880. Grt., Bull. Bkln. Ent. Soc., III, 46, *Hadena.*

HABITAT.—Washington.

The type is in the Tepper collection.

H. chryselectra Grt.*

1880. Grt., Can. Ent., XII, 244, *Hadena*.

HABITAT.—Colorado.

The type is in the Neumœgen collection.

Genus HILLIA Grt.

1883. Grt., Proc. Am. Phil. Soc., XXI, 168.

H. crasis H. Sch.*

1845. H. Sch., Schmett. Eur., II, 361, Noct., pl. 28, f. 139, *Noctua*.
1883. Moeschl., Stett. Ent. Zeit., XLIV, 117, *Orthosia*.
1891. Butler, Entomologist, XXIV, 241, ?*Anomogyna*.
erdmani Moeschl.
1874. Moeschl., Stett. Ent. Zeit., XXXV, 158, *Agrotis*.
1883. Moeschl., Stett. Ent. Zeit., XLIV, 117, pr. syn.
semisigna Wlk.
1857. Wlk., C. B. Mus., Het., XI, 748, ? *Orthosia*.
1891. Butler, Entomologist, XXIV, 241, ? pr. syn.
senescens Grt.
1878. Grt., Can. Ent., X, 235, *Hadena*.
1883. Grt., Proc. Am. Phil. Soc., XXI, 168, *Hillia*.
1891. Butler, Entomologist, IV, 241=*semisigna*.
vigilans Grt.
1878. Grt., Bull. Geol. Surv., IV, 176, *Hadena*.
1883. Grt., Proc. Am. Phil. Soc., XXI, 168, *Hillia*.

HABITAT.—Colorado; Lewis County, New York, in September; Orono, Maine; Ontario; Labrador; Lapland; Sweden.

I have seen the types of *vigilans*, *senescens*, and *semisigna* in the British Museum. Mr. Butler refers *semisigna* Wlk., to *senescens;* but in my notes I have referred it to *vigilans*, I think more correctly. The specimens of *crasis* in the museum left me in doubt as to the synonymy; but this doubt was removed by the specimens in the museum at Berlin. Mr. Moeschler long ago sent me a specimen of his *erdmani*, labeled =*crasis*. We have here a decidedly variable species, the gray form being *senescens* Grt., and the *crasis* of the Berlin Museum. The reddish form is *vigilans* Grt., and *erdmani* Moeschl., with *semisigna* Wlk., somewhat intermediate but nearer to *vigilans*. In maculation the median lines vary in distinctness and the ordinary spots in the amount of black surrounding them. The species is not common, and I think I have seen nearly all the specimens in the American collections.

H. algens Grt.*

1878. Grt., Can. Ent., X, 236, *Hadena*.
1883. Grt., Proc. Am. Phil. Soc., XXI, 168. *Hillia*.

HABITAT.—Maine; northern New York; Colorado.

The type is in the British Museum. It is a poor specimen and Mr. Butler makes it a *Calathusasina*, placing it next to *Charadra*.

H. discinigra Wlk.

1856. Wlk., C. B. Mus., Het., IX, 27, *Bryophila*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 8, *Jaspidea*.
1882. Grt., Ill. Essay, 40, ?*Valeria*.

HABITAT.—Hudson Bay Territory.

The type in the British Museum is a poor, crushed female, closely allied to *algens*, but much darker basally. It is not impossible that it may prove a suffused form of Mr. Grote's species, but it will need more material than I have seen to decide. Mr. Butler places it in *Dicopis*, evidently without reference to the essential characters of that genus.

Genus **TRACHEA** Hbn.

1816. Hbn., Verzeichniss, 219.

T. delicata Grt.*

1874. Grt., Trans. Am. Ent. Soc., V, 92, *Hadena*.
1890. Grt., Revised Check List, 20, *Trachea*.
interna Grt.
1875. Grt., Check List, Noct., 24, *Hadena*.
1876. Grt., Can. Ent., VIII, 189, pr. syn.
1890. Grt., Revised Check List, 20, pr. var.

HABITAT.—Canada; Northern, Eastern, Middle, and Central States.

The types are in the British Museum.

Genus **PSEUDANARTA** Hy. Edw.

1875. Proc. Cal. Ac. Sci., VI, 133.

A revision of the species of this genus will be found in the Entomologica Americana, V, 175, to which reference should be made for specific characters.

P. flava Grt.*

1874. Grt., Trans. Am. Ent. Soc., V, 91, *Hadena*.
1878. Grt., Bull. Geol. Surv., IV, 178, *Pseudanarta*.
crocea Hy. Edw.
1875. Hy. Edw., Proc. Cal. Ac. Nat. Sci., VI, 133, *Pseudanarta*.
1880. Grt., Bull. Geol. Surv., VI, 265, pr. var.
1881. Grt., Can. Ent., XII, 215, pr. var.
1889. Smith, Ent. Amer., V, 178, pr. syn.

HABITAT.—British Columbia; Oregon; Nevada; Colorado, August and September; Arizona.

Mr. Grote's type is in the British Museum; Mr. Edwards's species is in his own collection.

P. singula Grt.*

1880. Grt., Can. Ent., XII, 215, *Pseudanarta*.

HABITAT.—Texas, in October; Arizona; Colorado in August.

The type is in the British Museum.

P. flavidens Grt.*

1879. Grt., Bull. Geol. Surv., v, 205, *Pseudanarta.*

HABITAT.—Colorado in September; New Mexico.

The type is in the British Museum.

. aurea Grt.

1879. Grt., Bull. Geol. Surv., v, 205, *Pseudanarta.*
1882. Grt., Can. Ent., XIV, 19, *Pseudanarta.*
1889. Smith, Ent. Amer., v, 177, *Pseudanarta.*

HABITAT.—Southern Texas.

The type is in the British Museum and is a Heliothid, I think. It most resembles *Melicleptria*, and has the anterior tibia armed with a claw. I could not decide positively from the specimen where it best belonged and leave the species in the present genus until more material is at hand. It was unknown to me in 1889.

P. falcata Neum.

1883. Neum., Papilio, III, 141, *Pseudanarta.*
1889. Smith, Ent. Amer., v, 176, *Pseudanarta.*

HABITAT.—Arizona, Fort Huachuca.

The type is in the Neumœgen collection. I have had a recent chance to examine it, and find it a Heliothid, probably best referred to *Pseudanthœcia*. The material is too scant for positive reference and I leave it here with the probabilities indicated.

Genus OLIGIA Hbn.

1816. Hbn., Verzeichniss, 104.

A revision of the species of this genus will be found in Entomologica Americana, 1889, v, 145. The separation of the species there accords with the types so far as I have seen them, except where otherwise mentioned.

O. festivoides Gn.*

1852. Gn., Spec. Gen., Noct., I, 220, *Celæna.*
1856. Wlk., C. B. Mus., Het., x, 261, *Celæna.*
1881. Grt., Bull. Geol. Surv., v, 261, *Oligia.*
varia Wlk.
1857. Wlk., C. B. Mus., Het., XII, 808, *Erastria.*
cephalica Grt. MSS.
1891. Butler, Entomologist, XXIV, 241, pr. syn.

HABITAT.—Canada to Florida to Texas, west to Nebraska; Texas in March, April, and August; New York in May.

All the types are in the British Museum. Mr. Grote's name was never published, and would not have been cited here, but for Mr. Butler's note. *Erastria varia* is a well-defined specimen of this species.

O. chalcedonia Hbn.*

1815. Hbn., Eur. Schmett., Noct., 404, *Oligia.*
1816. Treit., Schmett. Eur., I, 74, *Bryophila.*
1852. Gn., Spec. Gen., Noct., I, 221, *Celæna.*
1856. Wlk., C. B. Mus., Het., X, 262, *Celæna.*
1891. Butler, Entomologist, XXIV, 240, *Mamestra.*
vincta Wlk.
1857. Wlk., C. B. Mus., Het., XII, 730, *Miana.*
1882. Grt., Ill. Essay, 44, pr. syn.
1891. Butler, Entomologist, XXIV, 240, pr. syn.
irresoluta Wlk.
1857. Wlk., C. B. Mus., Het., XII, 731, ? *Celæna.*
1882. Grt., Ill. Essay, 45, pr. syn.
1891. Butler, Entomologist, XXIV, 240, pr. syn.
arna Gn.
1852. Gn., Spec. Gen., Noct., I, 222, *Celæna.*
1856. Wlk., C. B. Mus., Het., X, 262, *Celæna.*
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 7, *Oligia.*
1889. Smith, Ent. Amer., V, 148, pr. syn.
tracta Grt.
1874. Grt., Proc. Ac. Nat. Sci. Phil., 1874, 204, pr. var.
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 7, pr. syn.
1881. Grt., Bull. Geol. Surv., VI, 261, an var. pr.
1889. Smith, Ent. Amer., V, 148, pr. syn.
1891. Butler, Entomologist, XXIV, 240, pr. syn.

HABITAT.—Canada in June; New York in June; Maryland; Florida, Texas, March, April, and August; Colorado; New Mexico; Alabama in November.

The Walker and Grote types are in the British Museum; Guenée's type is from the Doubleday material and should be there also; but I did not see it.

I can not quite see why Mr. Butler refers *chalcedonia* to *Mamestra* and *festivoides* to *Oligia.* The two are surely closely enough related to be congeneric.

O. versicolor Grt.*

1874. Grt., Proc. Ac. Nat. Sci. Phil., 1874, 204, *Oligia.*
1875. Grt., Can. Ent., VII, pl. I, f. 11, *Oligia.*

HABITAT.—Ontario in June; northern New York.

The species is in the British Museum, but apparently not the type specimen. Mr. Van Duzee has sent me the species from Buffalo.

O. exesa Gn.*

1852. Gn., Spec. Gen., Noct., I, 222, *Celæna.*
1856. Wlk., C. B. Mus., Het., X, 262, *Celæna.*
1881. Grt., Bull. Geol. Surv., VI, 265, *Oligia.*
floridiana Wlk.
1865. Wlk., C. B. Mus., Het., XXXIII, 730, *Hadena.*
1891. Butler, Entomologist, XXIV, 241, pr. syn.

HABITAT.—Florida in March.

The types are in the British Museum, and Mr. Butler's reference is correct.

O. fuscimacula Grt.*

1881. Grt., Bull. Geol. Surv., VI, 262, 265, *Oligia.*

HABITAT.—Florida; Texas.

A "type" is in the British Museum; another in the Tepper collection.

O. grata Hbn.*

1819. Hbn., Zutraege, 16, f. 71, 72, *Elaphria.*
1816. Hbn., Verzeichniss, 230, *Elaphria.*
1856. Wlk., C. B. Mus., Het., X, 293, *Caradrina.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 22, *Caradrina.*
rasilis Morr.
1874. Morr., Proc. Bost. Soc. N. H., XVII, 158, *Hadena.*
1875. Grt., Can. Ent., VII, 58, pr. syn.
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 211, pr. syn.
1880. Grt., Can. Ent., XII, 86, pr. syn.
1881. Grt., Bull. Geol. Surv., VI, 265, pr. syn.

HABITAT.—Maryland to Kansas to Florida to Texas, March to September in every month.

Types of Mr. Morrison's species are in the Tepper collection, and in the museum at Cambridge. The species is a common one locally in the Southern States.

O. nucicolora Gn.*

1852. Gn., Spec. Gen., Noct., I, 24, pl. 4, f. 9, *Monodes.*
1856. Wlk., C. B. Mus., Het., X, 284, *Monodes.*
unisignata Wlk.
1856. Wlk., C. B. Mus., Het., IX, 189, *Laphygma.*
1891. Butler, Entomologist, XXIV, 241, *Laphygma.*
paginata Morr.
1875. Morr., Proc. Ac. Nat. Sci. Phil., XXVII, 64, *Hadena.*
1881. Grt., Bull. Geol. Surv., VI, 265, *Oligia.*
clara Harv.
1878. Harv., Can. Ent., X, 57, *Caradrina.*

HABITAT.—Florida; Texas.

Mr. Morrison's type is in the Tepper collection; the others are in the British Museum. Mr. Grote suggested very doubtfully that Guenée might have intended to describe *paginata*; but figure and description pointed to *Platysenta atriciliata* so decidedly that I felt justified in making the reference in my recent list. Mr. Butler suggested that *paginata* might be *unisignata* Wlk., if the former was correctly named in the Museum. Harvey's type of *clara* is a dull, dark specimen, but unquestionably the same species.

Genus **PERIGEA** Gn.

1852. Gn., Spec. Gen., Noct., I, 225.

The species of this genus must be studied in connection with material from the West Indian fauna before a stable nomenclature can be attained. There are either several species resembling each other very closely or there are some that are widely distributed and somewhat variable.

P. xanthioides Gn.*

1852. Gn., Spec. Gen., Noct., I, 227, *Perigea.*
1856. Wlk., C. B. Mus., Het., x, 271, *Perigea.*
ab. **enixa** Grt.*
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 310, *Perigea.*
1882. Grt., New List, 28, pr. var.
1890. Grt., Revised Check List, 19, ab. pr.
1892. Beut., Bull. Am. Mus. N. H., IV, 69, larva.

HABITAT.—Canada; New York, southward to Florida; Northern States in March, June, and August; Texas in March, April, August.

Guenée's type is in the British Museum. Mr. Grote, Ill. Essay, 45, refers *P. mobilis* Wlk., C. B. M., Het., x, 277, as a synonym to this species, but I think incorrectly so. Walker's type is from the West Indies and differs quite evidently from our specimens. It may prove a geographical race eventually, but the material is not yet at hand to decide this positively. The type of *enixa* is also in the British Museum, and without a large amount of material certainly looks like a distinct species.

P. icole Grt.

1875. Grt., Proc. Bost. Soc. N. H., XVIII, 114, *Perigea.*

HABITAT.—Florida.

The type is in the British Museum.

P. vecors Gn.*

1852. Gn., Spec. Gen., Noct., I, 272, *Perigea.*
1856. Wlk., C. B. Mus., Het., x, 272, *Perigea.*
remissa Wlk.
1857. Wlk., C. B. Mus., Het., XI, 729, *Apamea.*
1882. Grt., Ill. Essay, 45=*luxa.*
luxa Grt.
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 200, *Perigea.*

HABITAT.—New York in June and August; Massachusetts in July; southward to Florida and Texas; Colorado; District of Columbia in August.

The types of all the names are in the British Museum, and all refer to the same species. Mr. Grote's suggestion that Walker's name be abandoned because already used in an allied genus is settled by Guenée's taking it. *Vecors* had not been identified heretofore.

P. epopea Cram.*

1782. Cram., Pap. Exot., III, 144, pl. 272, G. & H., *Noctua.*
1852. Gn., Spec. Gen., Noct., I, 259, *Agrotis.*
1856. Wlk., C. B. Mus., Het., x, 338, ? *Agrotis.*
1883. Grt., Can. Ent., XV, 3, *Perigea.*
infelix Gn.
1852. Gn., Spec. Gen., Noct., I, 229, *Perigea.*
1856. Wlk., C. B. Mus., Het., x, 271, *Perigea.*
1883. Grt., Can. Ent., XV, 3, pr. syn.
palpalis Wlk.

1856. Wlk., C. B. Mus., Het., IX, 240, *Condica.*
1882. Grt., Ill. Essay, 43, =*infelix.*
confederata Grt.
1871. Grt., Bull. Buff. Soc. Nat. Sci., II, 143, *Hadena.*
1882. Grt., Ill. Essay, 43, =*infelix.*

HABITAT.—Gulf States, extending northward along the coast, occasionally to Maine. New York in October; District of Columbia in September.

The types of all save Cramer's species are in the British Museum. There are more names which I am certain refer to this same form; but I have given above all from our own literature. Herrich-Schæffer and Gundlach both use Guenée's name in their works.

P. claufacta Wlk.*

1857. Wlk., C. B. Mus., Het., XI, 760, ? *Xylina.*
commoda Wlk.
1857. Wlk., C. B. Mus., Het., XI, 760, *Xylina.*
fabrefacta Morr.
1874. Morr., Proc., Bost. Soc. N. H., XVII, 146, *Segetia.*
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 7, *Perigea.*

HABITAT.—Massachusetts in September; New York, west to the Central States, south to Florida and Texas; Texas in November and December; District of Columbia in October.

The types are in the British Museum. *Claufacta* is a rubbed specimen, but of the normal type. *Commoda* is a more obscure form in which the white is almost eliminated. It is quite probable that Walker has still further described the species from South America, but I had no time to study the matter, and the relief of our own literature from unidentified names was my chief object.

C. punctifera Wlk.

1856. Wlk., C. B. Mus., Het., X, 263, *Celæna.*
semifurca Wlk.
1856. Wlk., C. B. Mus., Het., X, 732, *Celæna.*

HABITAT.—"United States;" St. Domingo.

Walker's types are in the British Museum. That of *punctifera* is one of Doubleday's specimens without locality and may have come from Florida. The other specimens are under the other name, one from the "West Indies," the other from Jamaica. Walker gives it from St. Domingo. The insect has the wing form of *albolabes*, but it is much smaller. It is like *fabrefacta* in color; the ordinary spots are well marked and the reniform is spotted with white.

P. falsa Grt.

1889. Grt. Can. Ent., XII, 215, *Perigea.*

HABITAT.—Havilah, California.

The type is in the British Museum. The insect has a curious resemblance to *Mamestra leucogramma*.

P. albolabes Grt.

1880. Grt., Can. Ent., XII, 216, *Perigea*.

HABITAT.—Prescott, Arizona; Colorado in August; New Mexico.

The type is in the British Museum.

P. loculosa Grt.

1881. Grt., Papilio, I, 151, *Perigea*.

HABITAT.—Tucson, Arizona; New Mexico.

Types are with Mr. Neumœgen and in the British Museum.

P. fasciata Hy. Edw.

1886. Hy. Edw., Ent. Amer., II, 169, *Perigea*.

HABITAT.—Colorado Desert.

The types are in Mr. Edwards's collection.

P. perplexa Grt.*

This species is not sanctioned by description so far as I can find. It is a common western form and has been quite generally distributed by Mr. Grote, the name appearing in his check list.

P. pulverulenta Smith.*

1891. Smith, Trans. Am. Ent. Soc., XVIII, 105, *Perigea*.

HABITAT.—Colorado, Glenwood Springs in August.

Types are in the National Museum and with Mr. Neumœgen.

P. dilecta Hy. Edw.

1884. Hy. Edw., Papilio, IV, 123, *Perigea*.

HABITAT.—Arizona.

The type is with Mr. Neumœgen, who says it is an *Ulolonche*.

P. continens Hy. Edw.

1884. Hy. Edw., Papilio, IV, 122, *Perigea*.

HABITAT.—Arizona.

The type is in Mr. Neumœgen's collection.

P. niveirena Harv.

1876. Harv., Can. Ent., VIII, 53, *Perigea*.

HABITAT.—Vancouver.

A type is in the British Museum; another in the Edwards collection.

P. benigna Hy. Edw.

1884. Hy. Edw., Papilio, IV, 122, *Perigea*.

HABITAT.—Arizona.

The type is with Mr. Neumoegen, and seems to be a rubbed specimen of *Hadena chryselectra*.

P. mersa Morr.

1875. Morr., Proc. Bost. Soc. N. H., XVIII, 120, *Segetia.*

HABITAT.—California.

The type is in the Strecker collection.

P. proxima Morr.

1875. Morr., Proc. Bost. Soc. N. H., XVIII, 240, *Segetia.*

HABITAT.—Texas.

Genus **DIPTERYGIA** Steph.

1829. Steph., Ill. Brit. Ent., Haust., II, 167.

D. scabriuscula Linn.*

1758. Linn., Syst. Nat., ed. X, 516, *Noctua.*
1759. Clerck, Icones, t. 1, f. 8, *Noctua.*
1871. Stgr., Cat. Lep. Eur., 103, *Dipterygia.*
pinastri Linn.
1761. Linn., Fn. Suec., 315, 1188, *Noctua.*
1767. Linn., Syst. Nat., ed. XII, II, 851, *Noctua.*
1787. Fabr., Mant. Ins., II, 171, *Noctua.*
1789. Gmelin, in Linn., Syst. Nat., ed. XIII, V, 2569, *Noctua.*
1810. Hbn., Eur. Schmett., IV, pl. 51, f. 246, *Noctua.*
1816. Hbn., Verzeichniss, 244, *Calliergis.*
1829. Steph., Ill. Br. Ent., Haust., II, 168, *Dipterygia.*
1852. Gn., Spec. Gen., Noct., I, 146, *Dipterygia.*
1856. Wlk., C. B. Mus., Het., X, 180, *Dipterygia.*
1862. Grt., Proc. Ent. Soc. Phil., I, 218, *Dipterygia.*
1871. Stgr., Cat. Lep. Eur., 103, pr. syn.

HABITAT.—Canada; Northern, Eastern, and Central United States, June to September; Colorado; Texas in March.

This is one of the species common to Europe and eastern North America, and has a much larger European bibliography, which it is not necessary to give here. It seems to have been seldom referred to in such way as to merit citation in our country.

Genus **HYPPA** Dup.

1844. Dup., Cat. Meth., IV, 231.

H. xylinoides Gn.*

1852. Gn., Spec. Gen., Noct., II, 106, pl. 8, f. 11, *Hadena.*
1856. Wlk., C. B. Mus., Het., XI, 584, *Hadena.*
1870. Saund., Can. Ent., II, 33, *Hadena*—larva.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 110, *Hyppa.*
1876. Grt., Stett. Ent. Zeit., XXXVII, 137, *Hyppa.*
rectilinea ‡ Wlk.
1857. Wlk., C. B. Mus., Het., XI, 579, *Hadena.*
1868. G. & R., Trans. Am. Ent. Soc., II, 78, pr. syn.
contraria Wlk.
1857. Wlk., C. B. Mus., Het., XI, 627, *Xylina.*
1868. G. & R., Trans. Am. Ent. Soc., II, 78, pr. syn.
ancocisconensis Morr.
1875. Morr., Can. Ent., VII, 188, *Hadena.*
1875. Grt., List Noctuidæ, 20, pr. syn.
1876. Grt., Stett. Ent. Zeit., XXXVII, 137, pr. syn.

HABITAT.—Canada to Virginia, west to the Central States; New Hampshire in August; Canada, July and August; New York, May, June, August, September; Illinois, August and September.

The types of *xylinoides* and *contraria* are in the British Museum and are correctly referred. Mr. Morrison's type I have not seen, but have seen specimens named by him, and Mr. Grote's reference is undoubtedly correct.

Genus **VALERIA** Germ.

1821. Germ., Mag. Ent., IV. p.?
1829. Steph., Ill. Brit. Ent., Haust., III, 22.

V. opina Grt.

1878. Grt., Bull. Geol. Surv., IV, 178, *Dryobota*.
1883. Grt., Proc. Am. Phil. Soc., XXI, 146, *Valeria*.

HABITAT.—California in October.

The type is in the British Museum. Mr. Graef also has one of the specimens from which the description was made.

Valeria is credited to Germar in literature, and the date given in the nomenclator is 1821. I have been unable to find that Germar uses the term at all, and on applying to Mr. Kirby, he informs me that he can find no earlier use of the term than that cited from Stephens. I give the citation from Germar as I find it; but it is incorrect.

Genus **CALOPHASIA** Steph.

1829. Steph., Ill. Br. Ent., Haust., II, 61.

C. strigata Smith.*

1891. Smith, Trans. Am. Ent. Soc., XVIII, 107, *Calophasia*.

HABITAT.—Colorado.

The type is in the National Museum.

Genus **HOMOHADENA** Grt.

1873. Grt., Bull. Buff. Soc. Nat. Sci., I. 180.

A monographic revision of the species will be found in the Proceedings of the United States National Museum for 1890, vol. XIII, 399–405, in which all the species are fully described.

H. incomitata Harv.*

1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 6, *Homohadena*.
1875. Harv., Can. Ent., VII, 136, *Homohadena*.

HABITAT.—Texas in May.

The type is in the British Museum.

H. inconstans Grt.

1883. Grt., Can. Ent., XV, 28, *Homohadena*.

HABITAT.—Arizona.

The type is in Mr. Neumœgen's collection.

H. figurata Harv.*

1875. Harv., Can. Ent., VII, 117, *Homohadena.*

HABITAT.—Nevada; California; Colorado, Glenwood Springs in September.

The type is in the British Museum and seems to be a good species, distinct from *retroversa*, which it resembles from the description.

H. chorda Grt.

1880. Grt., Can. Ent., XII, 256, *Homohadena.*

HABITAT.—Colorado; Sierra Nevada, California.

The type is in the British Museum.

H. epipaschia Grt.

1882. Grt., Proc. Kans. Ac. Sci., VIII, 19, *Homohadena.*

HABITAT.—Kansas; New Mexico.

The type is with Mr. Neumœgen.

H. vulnerea Grt.

1883. Grt., Can. Ent., XV, 29, *Homohadena.*

HABITAT.—Arizona.

The type is in Mr. Neumœgen's collection.

H. deserta Smith.

1890. Smith, Proc. U. S. Nat. Mus., XIII, 102, *Homohadena.*

HABITAT.—Colorado Desert.

The type is in the Edwards collection.

H. induta Harv.*

1874. Harv., Bull. Buff. Soc. Nat. Sci., II, 274, *Homohadena.*
1875. Morr., Can. Ent., VII., 91 = *retroversa.*
1875. Harv., Can. Ent., VII, 118, *Homohadena.*
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 6, an sp. dist.

HABITAT.—Texas, in April and May.

The type is in the British Museum.

H. retroversa Morr.*

1874. Morr., Proc. Bost. Soc. N. H., XVII, 157, *Homohadena.*
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 6 = *kappa.*
1890. Smith, Proc. U. S. Nat. Mus., XIII, 403, an sp. dist.

HABITAT.—Missouri.

The type is in the Tepper collection. A duplicate is in the National Museum, named by Morrison, but scarcely like the type and much more like *kappa*. It is possible that the type will prove an aberrant *kappa*, as suggested by Dr. Harvey.

H. infixa Wlk.*

1856. Wlk., C. B. Mus., Het., IX, 178, *Xylophasia.*
1890. Smith, Proc. U. S. Nat. Mus., XIII, 415, an *Homohadena?*
kappa Grt.
1874. Grt., Trans. Am. Ent. Soc., V, 92, *Homohadena.*

HABITAT.—Missouri; Iowa; Kansas; Texas; Florida, in October.

The types are in the British Museum. From Walker's description I suspected that his species would be referable to this genus, but it would not have been possible to identify it without seeing the type.

H. badistriga Grt.*

1872. Grt., Trans. Am. Ent. Soc., IV, 20, *Hadena*.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 181, *Homohadena*.
1875. Grt., Check List Noctuidæ, pl. i, f. 5, *Homohadena*.
1878. Lint., Ent. Contr., IV, 93, *Homohadena*.

HABITAT.—Canada and New York, in July; Maine to Texas; west to Kansas; Colorado.

The type is in the collection of the American Entomological Society.

Genus **ADITA** Grt.

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 63.

A. chionanthi S. & A.*

1797. S. & A., Ins. Ga., II, 195, pl. 98, *Phalæna*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 63, *Adita*.
1875. Morr., Ann. Lyc. Nat. Hist. N. Y., XI, 95, *Adita*.
1883. Grt., Proc. Am. Phil. Soc., XXI, 155, 168, *Adita*.

HABITAT.—Georgia; New York; Canada, in August; Platte Cañon, Colorado.

Genus **ONCOCNEMIS** Led.

1857. Lederer, Noct. Eur., 94.

A monographic revision of the species of this genus will be found in the Trans. Am. Ent. Soc., XVI, 321–349, 1889, which should be consulted for specific characters.

O. hayesi Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 106, pl. 3, f. 13, *Oncocnemis*.

HABITAT.—Colorado, July, August, September; Nevada County, California, September; British Columbia.

The type is in the British Museum.

O. dayi Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 105, pl. 3, f. 8, *Oncocnemis*.
1877. Grt., Bull. Geol. Surv., III, 116, *Oncocnemis*.

HABITAT.—Colorado, 10,000 feet, August and September.

The type is in the British Museum.

O. mirificalis Grt.*

1879. Grt., Bull. Geol. Surv., V, 207, *Oncocnemis*.

HABITAT.—Nevada; California, Nevada County, in September.

The type is in the Edwards collection.

O. fasciatus Smith.*

1888. Smith, Insect Life, I, 18, *Oncocnemis.*

Habitat.—Southwest Colorado, August 20; Nevada County, California, September.

The type is in the National Museum.

O. tenuifascia Smith.*

1888. Smith, Insect Life, I, 18, *Oncocnemis.*

Habitat.—Colorado, August and September.

The type is in the Tepper collection; others in the National Museum.

O. atrifasciata Morr.*

1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 431, *Metahadena.*
1878. Grt., Can. Ent., x, 231, *Homohadena.*
1880. Grt., Bull. Bkln. Ent. Soc., III, 38, *Homohadena.*
1889. Smith, Trans. Am. Ent. Soc., XVI, 329, *Oncocnemis.*

Habitat.—Maine; New York, Adirondack Mountains.

A type is in the Tepper collection; another is in the British Museum.

O. terminalis Smith.*

1888. Smith, Insect Life, I, 19, *Oncocnemis.*

Habitat.—Colorado, Denver and Boulder, in August.

The type is in the Tepper collection; another specimen is in the National Museum.

O. levis Grt.*

1880. Grt., Can. Ent., XII, 254, *Oncocnemis.*

Habitat.—Arizona; Colorado, Golden City and Denver, in August, Glenwood Springs in September.

Types are in the British Museum, and in the U. S. National Museum; the latter originally given me by Mr. Grote himself. Still another is with Mr. Neumœgen.

O. simplex Smith.

1888. Smith, Insect Life, I, 20, *Oncocnemis.*

Habitat.—Ashley Valley, Utah.

The type is in the Edwards collection.

O. augustus Harv.*

1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 73, pl. 3, f. 5, *Oncocnemis.*
1877. Grt., Bull. Geol. Surv., III, 176, *Oncocnemis.*

Habitat.—Texas in October; Colorado in August.

The type is in the British Museum.

O. iricolor Smith.*

1888. Smith, Insect Life, I, 19, *Oncocnemis.*

Habitat.—Colorado; Denver in August and September.

Types are in the National Museum and in the Tepper collection.

O. saundersiana Grt.*

1876. Grt., Can. Ent., VIII, 29, *Oncocnemis.*
1889. Smith, Trans. Am. Ent. Soc., XVI, 337, *Oncocnemis.*

HABITAT.—Texas in October; Illinois; Missouri in July; Canada.

The type is in the British Museum. This is a most curiously distributed species, occurring in isolated specimens only.

O. behrensi Grt.

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 65, *Oncocnemis.*
1877. Grt., Bull. Geol. Surv., III, 116, *Oncocnemis.*

HABITAT.—California in February.

The type is in the British Museum.

O. pernotata Grt.

1883. Grt., Can. Ent., XV, 25, *Oncocnemis.*

HABITAT.– Arizona.

The type is in the Neumœgen collection.

O. glennyi Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 141, pl. 4, f. 17, *Oncocnemis.*

HABITAT.—Colorado, July; Denver in September and October.

The type is in the British Museum.

O. homogena Grt.

1874. Grt., Bull. Geol. Surv., III, 800, *Oncocnemis.*

HABITAT.—Colorado in August.

The type is in the British Museum.

O. extremis Smith.

1890. Smith, Ent. Amer., VI, 30, *Oncocnemis.*

HABITAT.—Northwest British Columbia.

The type is with Mr. Neumœgen.

O. occata Grt.*

1874. Grt., Trans. Am. Ent. Soc., V, 114, *Cleophana.*
1875. Grt., Bull. Buff. Soc. Nat. Sci., III, 9, 16, pl. II, f. 6, *Cleophana.*
1876. Grt., Bull. Buff. Soc. Nat., Sci., III, 87, *Oncocnemis.*
1876. Grt., Stett. Ent. Zeit., XXXVII, 136, *Oncocnemis.*

HABITAT.—Texas, February and March; California, April and May; Colorado in August.

The type is in the British Museum.

O. meadiana Morr.

1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 60, *Oncocnemis.*
1877. Grt., Bull. Geol. Surv., III, 117, *Oncocnemis.*

HABITAT.—Arizona.

The type is in the Tepper collection.

O. fortis Grt.*

1880. Grt., Can. Ent., XII, 257, *Homohadena*.
1889. Smith, Trans. Am. Ent. Soc., XVI, 340, *Oncocnemis*.
picina Grt.
1880. Grt., Can. Ent., XII, 257, *Homohadena*.
1890. Smith, Proc. U. S. Nat. Mus., XIII, 401, *Homohadena*.
vorax Behrens.
1884. Behrens, Papilio, IV, 24, *Agrotis* (larva only).
1884. Smith, Papilio, IV, 114, *Polia* (desc. imago).
1889. Smith, Trans. Am. Ent. Soc., XVI, 340, pr. syn.

HABITAT.—Nevada; California.

The type of *picina* is in the British Museum; that of *fortis* is in the Tepper collection, and that of *vorax* I have had from Dr. Behrens for description. They all refer to one species only, slightly variable in ground color and in the relative distinctness of the punctiform markings. I did not know *picina* when I wrote, but suspected the synonymy from the descriptions.

O. chandleri Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 107, pl. 3, f. 9, *Oncocnemis*.
1875. Grt., Bull. Buff. Soc. Nat. Sci., III, 87, *Oncocnemis*.
1877. Grt., Bull. Geol. Surv., III, 17, *Oncocnemis*.

HABITAT.—Colorado, in July, August, and September; Nevada.

The type is in the British Museum; a specimen marked "type" by Mr. Morrison is in the National Museum.

O. riparia Morr.*

1875. Morr., Can. Ent., VII, 213, an var. *chandleri*.
1876. Grt., Bull. Buff. Soc. Nat. Sci., III, 87, = *chandleri*.
1876. Grt., Stett. Ent. Zeit., XXXVII, 117, = *chandleri*.
1877. Grt., Bull. Geol. Surv., III, 117, *chandleri*.
1879. Tepper, Bull. Bkln. Ent. Soc., I, 31, locality and habits.
1880. Grt., Can. Ent., XII, 256, = *chandleri*.
1881. Grt., Papilio, I, 31, an sp. dist.?
1889. Smith, Trans. Am. Ent. Soc., XVI, 313, dist. charact.

HABITAT.—Long Island, Buffalo, New York; Isle of Shoals, Massachusetts, in July.

A "type" is in the Tepper collection; another in the British Museum from the Grote material.

O. colorada Smith.*

1892. Smith, Ent. News, IV, 100, pl. VI, fig. 5, *Oncocnemis*.

HABITAT.—Central and western Colorado, July, August, and October.

The type is in the National Museum.

O. major Grt.*

1880. Grt., Papilio, I, 33, *Oncocnemis.*
1889. Smith, Trans. Am. Ent. Soc., XVI, 344, *Oncocnemis.*
aqualis Grt.
1881. Grt., Papilio, I, 33, *Oncocnemis.*
1889. Smith, Trans. Am. Ent. Soc., XVI, 345, *Oncocnemis.*
curricollis Grt.
1883. Grt., Can. Ent., XV, 10, *Oncocnemis.*
1889. Smith, Trans. Am. Ent. Soc., XVI, 344, pr. syn.

HABITAT.—Arizona; Colorado, Salida in July; California.

Types of *major* are in the Neumœgen collection and in the British Museum. The types of *curricollis* are in the National Museum and in the Neumœgen and Graef collections and have been already referred to *major* by me. The type of *aqualis* is in the British Museum, and is also the same as *major;* it is smaller, and the dashes in the s. t. space are not interrupted; but this is a variable character, and in the type of *major* in the Museum, they are barely to be termed interrupted. The British Museum types both of *major* and *aqualis* are females.

O. oblita Grt.

1877. Grt., Bull. Geol. Surv., III, 117, *Oncocnemis.*

HABITAT.—Nevada.

The type is in the British Museum. It agrees well with the description, but does not seem to be an *Oncocnemis;* at least I can not make out a claw to the fore tibia. I have seen the species without recognizing it. Mr. Grote states positively "Fore tibiæ with a short claw," and as it is possible that the type specimen has become defective, I can not at present dispute the reference.

O. cibalis Grt.*

1880. Grt., Can. Ent., XII, 244, *Oncocnemis.*

HABITAT.—Colorado in October.

The type is with Mr. Graef.

O. gracillima Grt.*

1881. Grt., Can. Ent., XIII, 231, *Oncocnemis.*

HABITAT.—Arizona.

The type is with Mr. Neumœgen.

O. atricollaris Harv.*

1874. Harv., Bull. Buff. Soc. Nat. Sci., II, 273, *Homohadena.*
1875. Morr., Can. Ent., VII, 91, *Copihadena.*
1875. Grt., Bull. Buff. Soc. Nat. Sci., III, 73, *Oncocnemis.*
1877. Grt., Bull. Geol. Surv., III, 117, *Oncocnemis.*
1881. Grt., Papilio, I, 34, *Oncocnemis.*

HABITAT.—Texas in March and May; Arizona; Colorado in August.

I have not seen the type, nor have I been able to find where it is.

O. griseicollis Grt.

1882. Grt., Can. Ent., XIV, 19, *Oncocnemis.*

HABITAT.—Arizona.

The type is with Mr. Neumœgen.

O. aterrima Grt.

1879. Grt., Can. Ent., XI, 199, *Oncocnemis.*
1889. Smith, Trans. Am. Ent. Soc., XVI, 321, an *Heliothid.*

HABITAT.—California.

Types are in the Edwards collection and in the British Museum. The Edwards specimen I had seen when I wrote in 1889, and the Museum specimen simply confirms my opinion. The anterior tibiæ are as in *Melicleptria*, shortened, with a single stout claw. The wings are broad, trigonate, the head small, eyes ovate. I leave it here until a new study of the Heliothid series brings it into a more natural relationship.

Genus **APOROPHYLA** Gn.

1841. Gn., Ind. Meth., Ann. Soc. Ent. Fr., x, 246.

A. yosemitæ Grt.

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 113, 145, pl. iii, f. 3, *Cucullia.*
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 309, *Aporophyla.*
1875. Speyer, Stett. Ent. Zeit., XXXVI, 349, *Aporophyla.*

HABITAT.—Yosemite, California, October 12.

The type is in the Edwards collection.

Genus **MACRONOCTUA** Grt.

1874. Grt., 6th Rept. Peab. Ac. Sci., 27.

M. onusta Grt.

1874. Grt., 6th Rept. Peab. Ac. Sci., 27, *Macronoctua.*

HABITAT.—Maine, in September; New York; New Jersey; Illinois; Iowa.

I do not know where the type of this species is to be found at present. I did not see it in the British Museum.

Genus **LATHOSEA** Grt.

1881. Grt., Bull. Geol. Surv., VI, 270.

L. pullata Grt.

1881. Grt., Bull. Geol. Surv., VI, 270, *Lathosea pulla.*
1890. Grt., Revised List Noct., 14, *L. pullata.*

HABITAT.—Oregon; Colorado.

The type is in the British Museum. It is a robust, xylinoid form with retracted head and short tongue, and has the appearance of *Scotochrosta.* The markings are strigate as in the Cuculliid series and it is a rather near ally of my *Pleroma*, I think. It seems a little out of place here; but until the material can be critically studied it had better be left as it is. Mr. Bruce has recently sent me a specimen from Colorado, which agrees fairly well with the type.

Genus **HADENELLA** Grt.

1883. Grt., Papilio, III, 123.

H. pergentilis Grt.*

1883. Grt., Papilio, III, 123, *Hadenella.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 156, 169, *Hadenella.*
1883. Grt., Can. Ent., XV, 122, *Hadenella.*

HABITAT.—Washington; Colorado; Wyoming.

Types are in the Neumœgen collection.

Genus **TRICHOPOLIA** Grt.

1883. Grt., Papilio, III, 76.

T. dentatella Grt.

1883. Grt., Papilio, III, 76, *Trichopolia.*

HABITAT.—Arizona.

The type is with Mr. Neumœgen.

T. ptilodonta Grt.

1883. Grt., Papilio, III, 77, *Trichopolia.*

HABITAT.—Arizona.

The type is with Mr. Neumœgen.

Genus **DRYOBOTA** Led.

1857. Lederer, Noct. Eur., 100.

None of the species heretofore described under this generic term belong to it. The small species recently described by myself are better placed in *Cleoceris*, as I find by examining the European forms. Mr. Grote's species, antedated by Walker, can not remain here; but as I have no more convenient place for it just now, no change is made.

D. illocata Wlk.*

1857. Wlk., C. B. Mus., Het., XI, 758, *Hadena.*
stigmata Grt.
1875. Grt., List Noctuidæ, 23, *Dryobota.*
1877. Grt., Can. Ent., IX, 199, *Dryobota.*
1891. Smith, Trans. Am. Ent. Soc., XVIII, 108, ? *Dryobota.*

HABITAT.—Canada; Eastern, Middle, and Central States; Colorado; Massachusetts in September; New York, August and September.

The types are in the British Museum and refer to one species only. Walker's species was described from "locality unknown."

Genus **PACHYPOLIA** Grt.

1874. Grt., 6th Rept. Peab. Ac. Sci., 27.

P. atricornis Grt.

1874. Grt., 6th Rept. Peab. Ac. Sci., 27, *Pachypolia.*
1875. Grt., List Noctuidæ, pl. f. 8, *Pachypolia.*

HABITAT.—Illinois, in October.

The type in the British Museum has pointed wings, color and type of maculation as in *occulta*, but with lengthily pectinated male antennæ. I do not remember having seen the species previously.

Genus **POLIA** Ochs.

1816. Ochs., Schmett. Eur., IV, 73.

Two quite distinct types are referred to this genus in our American material. Whether they can remain associated is questionable, but need not be decided here.

P. aedon Grt.

1880. Grt., Can. Ent., XII, 154, *Polia.*

HABITAT.—Colorado, in August; Nevada; Washington.

A type is in the British Museum; another with Mr. Neumœgen.

P. theodori Grt.*

1878. Grt., Can. Ent., x, 235, *Apatela.*
1880. Grt., Can. Ent., XII, 219, *Polia.*
1882. Grt., Ill. Essay, 55, pl., II, f. 17, *Polia.*
var. **epichysis** Grt.
1880. Grt., Can. Ent., XII, 219, *Polia.*
1882. Grt., Ill. Essay, 55, pl., II, f. 18, *Polia.*

HABITAT.—Colorado, August and September; New Mexico, California.

Both types are in the British Museum. I have seen considerable material of both forms and have no doubt of their relationship. Mr. Hy. Edwards first suggested it to me some years ago.

P. olorina Grt.

1876. Grt., Bull. Buff. Soc. Nat. Sci., III, 84, *Hadena.*

HABITAT.—California; Colorado.

The type is in the British Museum; another specimen, also marked "type," is in the Edwards collection. The species is allied to *Polia theodori* and varies in the direction of suffusion with black.

P. diversilineata Grt.*

1877. Grt., Bull. Geol. Surv., III, 119, *Hadena.*
illepida Grt.
1879. Grt., Can. Ent., XI, 95, *Polia.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 156, *Polia.*

HABITAT.—New Mexico; Nevada; Colorado; Manitou in July.

The type of *diversilineata* is a badly patched specimen covered with mildew, in the Cambridge collection. The type of *illepida* is in the British Museum; others, labeled by Mr. Grote, but not marked type, are in the National Museum. The two names refer to the same species.

P. confragosa Morr.*

1874. Morr., Proc. Bost. Soc. Nat. Hist., xvii, 138, *Polia.*

HABITAT.—Quebec, Canada; Wisconsin.

The type is with Prof. F. K. Belanger, and must be a strongly marked insect, from the description. The National Museum specimens are from the Meske collection and may not be well named.

P. speciosa Morr.

1874. Morr., Proc. Bost. Soc. N. H., xvii, 137, *Polia.*

HABITAT.—Cambridge, Mass., July 17.

The type is in the Graef collection.

P. pallifera Grt.

1877. Grt., Can. Ent., ix, 88, *Polia.*
1883. Grt., Proc. Am. Phil. Soc., xxi, 156, *Polia.*

HABITAT.—Illinois.

The type is in the British Museum and is a species I had not before seen.

P. pulverulenta Smith.*

1891. Smith, Trans. Am. Ent. Soc., xviii, 106, *Polia.*

HABITAT.—Colorado in September.

The type is in the National Museum. The species is unlike any in the British Museum and does not agree with the description of the others.

P. contacta Wlk.*

1856. Wlk., C. B. Mus., Het., ix, 58, *Acronycta.*
1882. Grt., Ill. Essay, 39, *Polia.*
aspera Morr.
1874. Morr., Proc. Bost. Soc. N. H., xvii, 134, *Acronycta.*
1880. Grt., Can. Ent., xii, 186, *Polia.*
1880. Grt., Bull. Bkln. Ent. Soc., iii, 37, *Polia.*
diffusilis Harv.
1878. Harv., Can. Ent., x, 56, *Polia.*
1880. Grt., Bull. Bkln. Ent. Soc., iii, 37, =*aspera.*
1880. Grt., Can. Ent., xii, 186, =*aspera.*
1882. Grt., Ill. Essay, 39, =*contacta.*

HABITAT.—Hudson's Bay Territory; Adirondack Mountains, New York, in August.

Types of *contacta* and *diffusilis* are in the British Museum, though I did not see the *contacta.* Mr. Grote apparently did see it, and as he had the type of Harvey's species his reference can be taken as correct. The type of *aspera* is in the Tepper collection, and is the same as *diffusilis* type.

P. medialis Grt.

1876. Grt., Ann. Lyc. Nat. Hist., N. Y., XI, 306, *Polia.*

HABITAT.—Canada; Schenectady, New York, in September.

The type is in the British Museum. It is a broad-winged form; looks like *Agrotis trabalis* and has the structural characters of *Dryobota stigmata.* The male antennæ are pectinated.

P. acutissima Grt.

1875. Grt., Check List Noct., 23, pl., f. 9, *Pachypolia.*
1881. Grt., Bull. Geol. Surv., VI, 267, *Polia.*

HABITAT.—Canada, Montreal; Nova Scotia.

The type is in the British Museum. It resembles *medialis*, but is much larger and a broader winged form.

Genus **FISHIA** Grt.

1877. Grt., Can. Ent., IX, 21.

F. enthea Grt.

1877. Grt., Can. Ent., IX, 21, *Fishia.*

HABITAT.—Oldtown, Maine.

The type is in the British Museum and is a species I had not before seen. It has the appearance of *Hadena evelina* French, and in structure is an *Hadena* with brush-like male antennæ.

Genus **ACTINOTIA** Hbn.

1816. Hbn., Verzeichniss, 214.

A. ramosula Gn.*

1852. Gn., Spec. Gen., Noct., II, 114, pl. 9, f. 1, *Cloantha.*
1857. Wlk., C. B. Mus., Het., XI, 616, *Anchmis.*
1873. Grt., Bull. Buff. Nat. Sci., I, 83, pl. II, f. 16, *Cloantha.*

HABITAT.—Canada; Northern, Eastern, Middle, and Central States, May, June, August, and September.

A. stewarti Grt.

1875. Grt., Can. Ent., VII, 28, *Actinotia.*

HABITAT.—California.

The type is in the British Museum, a duplicate thereof in the Edwards collection.

Genus **LUSSA** Grt.

1883. Grt., Can. Ent., XV, 127.

L. nigroguttata Grt.

1883. Grt., Can. Ent., XV, 127, *Lussa.*

HABITAT.—Florida.

The type is in the Neumœgen collection. Mrs. Slosson has taken this species at Charlotte Harbor. It looks like a West Indian species and may be previously described from that locality.

Genus **LAPHYGMA** Gn.

1852. Gn., Spec. Gen., Noct., I, 156.

L. frugiperda S. & A.*

1797. S. & A., Ins. Ga., II, 191, pl. 96, *Phalæna.*
1832. Geyer, Zutræge, 22, No. 342, ff. 683, 684. *Trigonophora.*
1852. Gn., Spec. Gen., Noct., I, 159, *Laphygma.*
1856. Wlk., C. B. Mus., Het., IX, 189, *Laphygma.*
1882. Riley, Papilio, II, 43, *Laphygma.*
1885. Riley, 4th Rept. U. S. Ent. Comm., 353, pl. 62, f. 2, *Laphygma.*
macra Gn.
1852. Gn., Spec. Gen., Noct., I, 157, *Laphygma.*
1868. H. Sch., Corr. Blatt, 1868, 115, pr. syn.
signifera Wlk.
1856. Wlk., C. B. Mus., Het., IX, 193, *Prodenia.*
plagiata Wlk.
1856. Wlk., C. B. Mus., Het., IX, 194, *Prodenia.*
autumnalis Riley.
1871. Riley, 3d Rept. Ins. Mo., 109, ff. 44–49, *Prodenia.*
1871. Riley, Am. Ent., II, 363, ff. 221, 223, *Prodenia.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., II, 22, =*frugiperda.*
1876. Riley, 8th Rept. Ins. Mo., 48, ff. 26, 27, *Prodenia.*
1881. Grt., Can. Ent., XIII, 91, =*frugiperda.*
var. **fulvosa** Riley.
1876. Riley, 8th Rept. Ins. Mo., 49, *Prodenia.*
var. **obscura** Riley.
1876. Riley, 8th Rept. Ins. Mo., 49, *Prodenia.*

HABITAT.—Canada, south to Florida and Texas, west to Missouri, Nebraska, Kansas; Jamaica; Brazil; August, September and October.

The economic bibliography of this insect is large, and only a mere outline is here given to accredit the species and varieties.

The types of *macra* and of Walker's species are in the British Museum. Dr. Riley's types are in the National Museum.

L. flavimaculata Harv.*

1876. Harv., Can. Ent., VIII, 54, *Caradrina.*
1876. Grt., Can. Ent., VIII, 189, = *L. frugiperda.*
1890. Grt., Revised Check List, 23, an sp. dist.

HABITAT.—California, March, April, August to November; Colorado.

The type is in the British Museum. A fine series of specimens in the National Museum, many of them bred, long since led me to the conclusion that the species was a good one, but better referred to *Laphygma* than to *Caradrina.*

L. inflexa Morr.

1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 65, *Laphygma.*

HABITAT.—Florida.

The type is in the Tepper collection. To the kindness of Prof. Cook I owe an opportunity of studying the type. It is, like so many of Morrison's types, a poor specimen, and will probably be found referable to *Lussa* Grt., and a not distant relative of *L. nigroguttata.*

Genus **PRODENIA** Gn.

1852. Gn., Spec. Gen., Noct., I, 159.

P. eridania Cram.*

1782. Cram., Pap. Exot., IV, 133, pl. 358, f. E and F, *Phalæna.*
1816. Hbn., Verzeichniss, 241, *Calliergis.*
1852. Gn., Spec. Gen., Noct., I, 148, *Xylomiges.*
1856. Wlk., C. B. Mus., Het., IX, 182, ? *Xylomiges.*

phytolaccæ S. & A.

1797. S. & A., Ins. Ga., II, 193, pl. 97, *Phalæna.*
1852. Gn., Spec. Gen., Noct., I, 148, pr. var.
1856. Wlk., C. B. Mus., Het., IX, 183, pr. syn.
1873. Grt., Bull. Buff. Soc. Nat. Sci., II, 28, *Xylomiges.*
1879. Grt., Can. Ent., XI, 215, *Prodenia.*

derupta Morr.

1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 62, *Actinotia.*
1879. Grt., Can. Ent., XI, 205, ?=*phytolaccæ.*
1880. Grt., Can. Ent., XII, 186, =*phytolaccæ.*

nigrofasciata Hulst.

1881. Hulst, Bull. Bkln. Ent. Soc., III, 77, *Leucania.*
1881. Hulst, Bull. Bkln. Ent. Soc., IV, 7, pl. I, f. 9, *Leucania.*
1891. Smith, List Lepidoptera, 45, pr. syn.

HABITAT.—Georgia; Florida; Texas in September; Central and South America.

A distinctly marked yet strongly variable species. The names above given apply to our own fauna only; the insect has been further redescribed by Walker as *Xylina inquieta*, *Prodenia strigifera*, and *Leucania externa*, and by Mr. Butler as *Prodenia ignobilis*. The types of these latter are in the British Museum. Mr. Hulst's type is now at Rutgers, and Mr. Morrison's is with Mr. Graef. I think there are yet more names, but as they are based on other than boreal American specimens, they are not noted here.

P. commelinæ S. & A.*

1797. S. & A., Ins. Ga., II, 189, pl. 95, *Phalæna.*
1816. Hbn., Verzeichniss, 217, *Trigonophora.*
1852. Gn., Spec. Gen., Noct., I, 162, *Prodenia.*
1856. Wlk., C. B. Mus., Het., IX, 193, *Prodenia.*

HABITAT.—Massachusetts; District of Columbia, August to October, southward; Texas in December; Illinois, August and September.

Hübner and Herrich-Schæffer both refer this as the same as *androgena* Cramer, while Guenée refers to them as distinct species. The matter is not an important one for present settlement. Gundlach in his Contributions describes also the early stages.

P. ornithogalli Gn.*

1852. Gn., Spec. Gen., Noct., I, 163, *Prodenia.*
1856. Wlk., C. B. Mus., Het., IX, 193, *Prodenia.*
1882. Riley, Papilio, II, 43, *Prodenia.*

lineatella Harv.

1874. Harv., Bull. Buff. Soc. Nat. Sci., II, 275, *Prodenia.*
1881. French, Can. Ent., XIII, 21, larva.

1882. Riley, Papilio, II, 43, ? pr. syn.
commelinæ ‡ Riley.
1869. Riley, 1st Rept. Ins. Mo., 87, *Prodenia.*
1871. Riley, 3d Rept. Ins. Mo., 113, f. 48*b*, *Prodenia.*
1871. Riley, Amer. Ent., II, 62, f. 41, *Prodenia.*
1875. Grt., Check List Noct., 11, pr. syn.
1881. Riley, Supplt. and Index to Mo. Repts., 56, pr. syn.

HABITAT.—Massachusetts in July; New York, southward to Florida, west to Minnesota; Nebraska; California in April, September, and October; Texas in April and October.

Dr. Harvey's type is in the British Museum, and is like specimens of Guenée's species, apparently typical, though not the types.

P. eudiopta Gn.*

1852. Gn., Spec. Gen., Noct., I, 164, *Prodenia.*
1856. Wlk., C. B. Mus., Het., IX, 193, *Prodenia.*
flavimedia Harv.
1874. Harv., Bull. Buff. Soc. Nat. Sci., II, 274, *Prodenia.*
1882. Riley, Papilio, II, 43, =*ornithogalli.*
commelinæ ‡ Riley.
1871. Riley, 3d Rept. Ins. Mo., 113, f. 48*c*, *Prodenia.*
1881. Riley, Supplt. and Index to Mo. Repts., 56, pr. syn.

HABITAT.—Massachusetts in September; New York to Florida; Texas in April; Missouri; Nebraska; California; District of Columbia in August.

The type of *flavimedia* is in the British Museum and is like specimens of *eudiopta*, typical though not types of Guenée's species.

P. præfica Grt.*

1875. Grt., Can. Ent., VII, 44, *Prodenia.*

HABITAT.—California in June.

The type is in the British Museum.

Genus **DARGIDA** Wlk.

1856. Wlk., C. B. Mus., Het., IX, 201.

D. procinctus Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 138, pl. IV, f. 6, *Eupsephopæctes.*

HABITAT.—California, March, June, August, September, October; Colorado in October; Portland, Oregon, April, May.

The type is in the British Museum. In the Berliner Museum I saw specimens of *Dargida grammivora* Wlk., that very strongly resemble our species and agree perfectly in generic characters. Mr. Grote's generic term *Eupsephopæctes* must sink.

Genus **CONSERVULA** Grt.

1875. Grt., Check List Noct., 11.

C. anodonta Gn.*

1852. Gn., Spec. Gen., Noct., II, 63, pl. VII, f. 8, *Phlogophora.*
1857. Wlk., C. B. Mus., Het., XI, 541, *Phlogophora.*
1875. Grt., Check List Noct., 11, *Conservula.*

HABITAT.—Canada; Maine; Vermont, in July and August; northern New York in July.

The type is in the British Museum.

Genus **TRIGONOPHORA** Hbn.

1816. Hbn., Verzeichniss, 217.

T. periculosa Gn.*

1852. Gn., Spec. Gen., Noct., II, 65, *Phlogophora*.
1857. Wlk., C. B. Mus., Het., XI, 512, *Phlogophora*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 17, *Trigonophora*.
var. **V-brunneum** Grt.*
1875. Grt., Check List Noct., 23, *Trigonophora*.
1882. Grt., New List, 29, an var. pr.

HABITAT.—Newfoundland; Canada in July and August; northern, eastern, and central United States, July to September; Colorado; British Columbia.

The types, both of the species and variety, are in the British Museum.

Genus **BROTOLOMIA** Led.

1857. Lederer, Noct. Eur., 115.

B. iris Gn.*

1852. Gn., Spec. Gen., Noct., II, 61. *Phlogophora*.
1857. Wlk., C. B. Mus., Het., XI, 512, *Phlogophora*.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 110, *Brotolomia*.

HABITAT.—Canada; Northern, Middle, and Central States, June and July.

The type is in the British Museum. Our species is probably as distinct generically from the European form as are any others in this series, and if the other genera hold, a new genus, *Mesolomia mihi*, must be used for *iris*.

Genus **EUPLEXIA** Steph.

1829. Steph., Ill. Brit. Ent., Haust., III, 3.

E. lucipara Linn.*

1758. Linn., Syst. Nat., ed. X, 518, *Noctua*.
1761. Linn., Fn. Suec., 1201, *Noctua*.
1767. Linn., Syst. Nat., ed. XII, II, 857, *Noctua*.
1781. Fabr., Spec. Ins., II, 233, *Noctua*.
1793. Fabr., Ent. Syst., III, 2, 99, *Noctua*.
1816. Hbn., Verzeichniss, 217, *Trigonophora*.
1829. Steph., Ill. Brit. Ent., Haust., III, 1, *Euplexia*.
1851. Gn., Spec. Gen., Noct., II, 68, *Euplexia*.
1857. Wlk., C. B. Mus., Het., XI, 543, *Euplexia*.
1875. Speyer, Stett. Ent. Zeit., XXXVI, 153, *Euplexia*.
1874. Morr., Psyche, I, 22, ♂ organs.
1883. Hy. Edw., Papilio, III, 133, larva.
1889. Dyar, Can. Ent., XXI, 137, life history.

HABITAT.—United States generally, May to August; Europe.

For the European bibliography Staudinger and other similar works should be consulted. In America the species has been but rarely referred to.

Genus **NEPHELODES** Gn.

1852. Gn., Spec. Gen., Noct., I, 129.

N. minians Gn.*

1852. Gn., Spec. Gen., Noct., I, 130, *Nephelodes.*
1856. Wlk., C. B. Mus., Het., IX, 163, *Nephelodes.*
1878. French, in 7th Rept. Ins. Ills., 99, 220, larva.
1878. French, Can. Ent., X, 61, larva.
1880. Riley, Amer. Ent., III, 205, larva.
1881. Riley, Amer. Nat., XV, 575, 577, larva.
1883. Lint., 1st Rept. State Ent., N. Y., 99, ff. 24, 25, life history.
expansa Wlk.
1857. Wlk., C. B. Mus., Het., XI, 399, *Graphiphora.*
1865. Wlk., C. B. Mus., Het., XXXV, 1957, pr. syn.
1868. G. and R., Trans. Am. Ent. Soc., II, 78, pr. syn.
sobria Wlk.
1857. Wlk., C. B. Mus., Het., XI, 744, *Graphiphora.*
var. **violans** Gn.
1852. Gn., Spec. Gen., Noct., I, 130, *Nephelodes.*
1856. Wlk., C. B. Mus., Het., IX, 163, *Nephelodes.*
1882. Grt., New List, 29, pr. var.
subdolens Wlk.
1857. Wlk., C. B. Mus., Het., X, 405, *Graphiphora.*

HABITAT.—Canada; United States generally; Eastern States in August and September; Colorado, August to October.

The types of all the names are in the British Museum. *G. expansa* Wlk., I did not find; but as Walker has himself referred it as a synonym, he may have removed the label—or what is equally possible, I overlooked the specimen, though I found all the others referable here. *G. sobria* is from Bogota, while *subdolens* is from "locality unknown."

Genus **TRICHOLITA** Grt.

1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 211, 215.

T. signata Wlk.*

1860. Wlk., Can. Nat. and Geol., V, 253, *Nephelodes.*
1877. Grt., Can. Ent., IX, 28, *Tricholita.*
semiaperta Morr.
1874. Morr., Can. Ent., VI, 105, *Hydrœcia.*
1874. Morr., Proc. Bost. Soc. N. H., XVII, 150, *Perigrapha.*
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 211, 215, *Tricholita.*
1875. Grt., Stett. Ent. Zeit., XXXVI, 341, *Tricholita.*
1877. Grt., Can. Ent., IX, 28, pr. syn.

HABITAT.—Canada; New York and Illinois in July and August; Massachusetts in August; Northern, Eastern, Middle, and Central States; New Mexico.

Mr. Morrison's type is in the Tepper collection. The Walker type is in the collection of the Entomological Society of Ontario, and has been examined by Mr. Grote, who is responsible for its reference to *semiaperta.* I can not quite understand why Mr. Grote, after positively making it a synonym, should still continue to list *semiaperta* without any reference to *signata.*

T. fistula Harv.*

1878. Harv., Can. Ent., x, 56, *Tricholita.*

HABITAT.—California; Arizona; Colorado in September.

The type is in the British Museum. In the Neumœgen collection Mr. Grote has labeled specimens of this same species *T. completa* Grt., type; but I have not found any description of a species under that name. I included the name in my list on the faith of this label, but it must be omitted hereafter.

T. inconspicua Grt.

1883. Grt., Can. Ent., xv, 129, *Tricholita.*

HABITAT.—Arizona.

The type is with Mr. Neumœgen.

Genus **HELOTROPHA** Led.

1857. Lederer, Noct. Eur., 118.

A. reniformis Grt.*

1874. Grt., Can. Ent., VI, 14, *Luperina.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 18, *Helotropha.*
1876. Speyer, Stett. Ent. Zeit., XXXVI, 202, ? an var. *fibrosa.*
var. **atra** Grt.
1874. Grt., Proc. Ac. Nat. Sci. Phil., 1874, 200, pr. var.
1875. Grt., Proc. Ac. Nat. Sci. Phil., 1875, 419, sp. dist. pr.
1882. Grt., New List, 29, pr. var.

HABITAT.—Canada; Northern, Middle, and Central States; July to September.

The type of *reniformis* is in the collection at Cambridge; that of *atra* I have not seen, nor do I know where it is.

Genus **HYDRŒCIA** Gn.

1837. Gn., Essai sur la class. Noct., 237.
1852. Gn., Sp. Gen., Noct., I, 125.

The species here placed under this genus have been transferred to *Gortyna*, to *Apamea*, and again to *Hydrœcia* by Mr. Grote, as his ideas of types and other matters changed. These changes are not all noted here. In using *Hydrœcia* now I follow European precedent. It is quite likely that some of the species do not belong here.

H. lunata Smith.*

1891. Smith, Trans. Am. Ent. Soc., XVIII, 110, *Apamea.*
1891. Smith, List Lepidoptera, 45, *Hydrœcia.*

HABITAT.—California, Alameda in June, Mount Shasta district.

Types are in the National Museum and in the Edwards collection.

H. u-album Gn.*

1852. Gn., Spec. Gen., Noct., I, 345, *Ceramica*.
1856. Wlk., C. B. Mus., Het., X, 418, *C. v-album*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 22, *C. w-album*.
1891. Smith, Proc. U. S. Nat. Mus., XIV, 231, *Mamestra*.
purpuripennis Grt.
1874. Grt., Proc. Ac. Nat. Sci. Phil., 1874, 206, *Apamea*.
baliola Morr.
1874. Morr., Proc. Bost. Soc. N. H., XVII, 148, *Orthosia*.
1875. Grt., Can. Ent., VII, 58, = *purpuripennis*.
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 309, = *purpuripennis*.

HABITAT.—Massachusetts, May, June, August; New York; Illinois; Minnesota.

Guenée's type is in the British Museum. Messrs. Morrison and Grote described at nearly the same time, both from material collected by Mr. Thaxter, who probably has both types.

H. velata Wlk.*

1865. Wlk., C. B. Mus., Het., XXXII, 671, *Apamea*.
1891. Smith, Can. Ent., XXIII, 121, *Apamea*.
sera G. & R.
1868. G. & R., Trans. Am. Ent. Soc., I, 345, pl. 7, f. 55, *Hydrœcia*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 18, *Hydrœcia*.
1874. Grt., Proc. Ac. Nat. Sci. Phil., 1874, 206, *Apamea*.
1882. Grt., Can. Ent., XIV, 170, *Helotropha*.
1884. Bean, Can. Ent., XVI, 67, larva on *Anemone*.
1891. Smith, Can. Ent., XXIII, 121, pr. syn.

HABITAT.—Canada; Maine to Pennsylvania; west to Missouri; Iowa, June, July, and August.

Walker's type is in the National Museum. I do not know where Grote and Robinson's type is at present.†

H. juvenilis Grt.*

1881. Grt., Bull. Geol. Surv., VI, 267, *Gortyna*.
1881. Grt., Trans. Kans. Ac. Sci., VII, 68, *Gortyna*.

HABITAT.—Colorado; Kansas.

The type is in the British Museum.

H. nictitans Linn.*

1761. Linn., Fn. Suec., 1215, *Noctua*.
1767. Linn., Syst. Nat., ed. XII, 817, *Noctua*.
1792. Bkh., Eur. Schmett., IV, 463, *Noctua*.
1816. Ochs., Schmett. Eur., IV, 75, *Apamea*.
1816. Hbn., Verzeichniss, 232, *Sideridis*.
1852. Gn., Spec. Gen., Noct., I, 126, *Hydrœcia*.

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† From this point to *Xylomiges*, my references to dates and localities are less complete, owing to the fact that the set of galley proofs first corrected by me were lost en route or mislaid at the printing office. I threw away the note slips after I had entered them on the galley proofs, and was not able to duplicate them afterward.

1856. Wlk., C. B. Mus., Het., IX, 159, *Hydræcia*.
1874. Grt., Proc. Ac. Nat. Sci. Phil., 1874, 206, *Apamea*.
1882. Buckler, Ent. Mo. Mag., XVIII, 195, larva.
americana Speyer.
1875. Speyer, Stett. Ent. Zeit., XXXVI, 152, an var. pr.
var. **erythrostigma** Haw.
1829. Haw., Lep. Britt., 231, *Apamea*.
1874. Grt., Proc. Ac. Nat. Sci. Phil., 1874, 206.
var. **lucens** Freyer.
1845. Freyer, Neue Beitr., V, 113, *Apamea*.
1852. Gn., Spec. Gen., Noct., I, 126, pr. var.
Apamea lusca Harr. MSS.
1891. Smith, List Lepidoptera, 45, pr. syn.

HABITAT.—Nova Scotia; Hudson's Bay Territory; United States generally, July and August; Europe.

The *Apamea lusca* is in the Harris collection in the Boston Society of Natural History. There seems to be no perceptible constant difference between European and American examples of this species; yet Speyer thought there was enough to authorize a variety *americana*, which was never heard of after its description.

H. erepta Grt.

1881. Grt., Bull. Geol. Surv., VI, 267, *Gortyna*.

HABITAT.—Douglas County, Kansas.

The type is in the British Museum.

H. immanis Gn.*

1852. Gn., Spec. Gen., Noct., I, 128, *Hydræcia*.
1856. Wlk., C. B. Mus., Het., IX, 162, *Hydræcia*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 18, *Gortyna*.
1882. Dodge, Can. Ent., XIV, 93, larva on Hops.
1885. Lint., 2d Rept. Ins. N. Y., 41, larva.
obliqua Harv.
1876. Harv., Can. Ent., VIII, 53, *Gortyna*.
1881. Grt., Bull. Geol. Surv., VI, 268, *Gortyna*.
1881. Smith, Bull. 4, Div. Ent. U. S. Dept. Agl., 38, pr. syn.

HABITAT.—Northern United States, Atlantic to Pacific; New York in August; Washington; Colorado; Illinois in August and September.

Guenée's type is in the British Museum; where also there are specimens of *obliqua* Harvey, agreeing with the type in the Edwards collection. There is no reasonable doubt of their identity.

H. stramentosa Gn.

1852. Gn. Spec. Gen., Noct., I, 129, pl. 6, f. 2, *Hydræcia*.
1856. Wlk., C. B. Mus., Het., IX, 162, *Hydræcia*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 18, *Gortyna*.

HABITAT.—Middle and Central States; New York; Illinois.

The type is in the British Museum.

H. inquæsita G. & R.*

1868. G. & R., Trans. Amer. Ent. Soc., I, 344, *Gortyna.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 110, *Hydræcia.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 18, *Hydræcia.*
1874. Grt., Proc. Ac. Nat. Sci. Phil., 1874, 206, *Apamea.*
1882. Grt., New List, 29, *Gortyna quæsita* err. type.
1882. Grt., Can. Ent., XIV, 170, *Apamea.*

HABITAT.—New York; Rhode Island; Eastern, Middle, and Central States; New Hampshire in September.

A specimen labeled by Mr. Grote is in the British Museum. I have not seen the type, and do not know where it is.

H. cerina Grt.*

1874. Grt., Proc. Ac. Nat. Sci. Phil., 1874, 200, *Gortyna.*
1882. Grt., Ill. Essay, 59, pl. II, f. 25, *Gortyna.*

HABITAT.—Kansas; Maine.

The type is in the British Museum.

H. rigida Grt.*

1877. Grt., Can. Ent., IX, 87, *Gortyna.*
1881. Grt., Bull. Geol. Surv., VI, 269, *Gortyna.*
1882. Grt., Papilio, II, pl. 1, f. 3 and 3*a*, *Gortyna.*
1882. Grt., Ill. Essay, 58, pl. II, f. 24, *Gortyna.*

HABITAT.—New York; Massachusetts; Illinois; Maine in September.

The type is in the British Museum.

H. impecuniosa Grt.

1881. Grt., Bull. Geol. Surv., VI, 267, *Gortyna.*
1882. Grt., Can. Ent., XIV, 184, *Gortyna.*

HABITAT.—Massachusetts; New York.

The type is in the British Museum.

H. cataphracta Grt.*

1864. Grt., Proc. Ent. Soc. Phil., III, 81, pl. 2, f. 3, *Gortyna.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 111, 142, *Hydrœcia.*
1881. Grt., Bull. Geol. Surv., VI, 269, *Gortyna.*
1891. Dyar, Can. Ent., XXIII, 157, larva.

HABITAT.—Canada in September; Massachusetts; northern New York in October; Colorado.

The type should be in the collection of the American Entomological Society, but I have not found it. A specimen in the British Museum, labeled by Mr. Grote, agrees with the identification general in American collections. *Leucostigma* will be cited under *rutila.*

H. purpurifascia G. & R.

1868. G. & R., Trans. Am. Ent. Soc., I, 341, pl. 7, f. 51, *Gortyna.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 110, *Hydræcia.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 19, *Ochria.*
1874. Grt., Can. Ent., VI, 216, *Gortyna.*
1881. Grt., Bull. Geol. Surv., VI, 269, *Gortyna.*

HABITAT.—Maine and Massachusetts in September and October; New York, August and September; Illinois; Colorado.

A specimen in the collection of the American Entomological Society, labeled by Mr. Grote, is probably the type, though not so marked.

H. rutila Gn.*

1852. Gn., Spec. Gen., Noct., I, 123, pl. VI, f. I, *Gortyna.*
1856. Wlk., C. B. Mus., Het., IX, 157, *Gortyna.*
1873. Grt., Bull. Buff. Soc. Nat. Sci. I, 111, *Hydrœcia.*
1881. Grt., Bull. Geol. Surv., VI, 268, *Gortyna.*
leucostigma || Harris.
1862. Harris, Ins. Inj. to Veg., 440, *Gortyna.*
1863. Grt., Proc. Ent. Soc. Phil., II, 432, pr. syn.
1865. Grt., Proc. Ent. Soc. Phil., IV, 325, = *cataphracta.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 111, = *rutila.*
1881. Grt., Bull. Geol. Surv., VI, 268, ? = *harrisii.*

HABITAT.—Maine; Massachusetts; New York; Illinois; Colorado. The Eastern States in September.

The type is in the British Museum. It differs from the *harrisii* in the same collection by the more even s. t. line.

H. harrisii Grt.

1881. Grt., Bull. Geol. Surv., VI, 268, 276, *Gortyna.*

HABITAT.—Massachusetts; Maine in September.

The type is in the British Museum.

H. speciosissima G. & R.

1868. G. & R., Trans. Am. Ent. Soc., I, 312, pl. VII, f. 52, *Gortyna.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 111, *Hydrœcia.*
1881. Grt., Bull. Geol. Surv., VI, 269, *Gortyna.*

HABITAT.—Rhode Island; Massachusetts in September; northern New York.

I have not seen the type of this species and have no idea where it can be.

H. marginidens Gn.*

1852. Gn., Spec. Gen., Noct., I, 123, *Gortyna.*
1856. Wlk., C. B. Mus., Het., IX, 157, *Gortyna.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 111, *Hydrœcia.*
1881. Grt., Bull. Geol. Surv., VI, 269, *Gortyna.*

HABITAT.—Northern, Eastern, and Middle States; Illinois.

The type is in the British Museum, and is the species I have been naming *limpida* in collections, including that of the National Museum. The type of *limpida*, also in the British Museum, is very dark, almost black; but with exactly the same marking as in *marginidens.* I have no doubt the two will prove varieties, as this kind of variation is not uncommon in *Gortyna.* At all events all my *limpida* labels should be changed to read *marginidens*, as I have changed them in the National Museum

H. limpida Gn.

1852. Gn., Spec. Gen., Noct., I, 124, *Gortyna*.
1856. Wlk., C. B. Mus., Het., IX, 157, *Gortyna*.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 110, *Hydræcia*.
1881. Grt., Bull. Geol. Surv., VI, 269, *Gortyna*.

HABITAT.—New York; Eastern and Middle States: Massachusetts in September.

The type is in the British Museum, and has been spoken of under *marginidens*.

H. cerussata Grt.

1864. Grt., Proc. Ent. Soc. Phil., II, 431, pl. ix, f. 1, *Gortyna*.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 110, *Hydræcia*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 18, =*limpida*.
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 216, an sp. dist.
1881. Grt., Bull. Geol. Surv., VI, 269, *Gortyna*.

HABITAT.—Pennsylvania; New York; Massachusetts in September.

The type should be in the collection of the American Entomological Society; but I have not found it there. It is undoubtedly a near relative of *limpida;* but seems distinct and at all events needs critical study before definite conclusions can be reached.

H. appasionata Harv.

1876. Harv., Can. Ent., VIII, 155, *Gortyna*.

HABITAT.—London, Canada.

The type of this very distinct species is in the British Museum.

H. nitela Gn.*

1852. Gn., Spec. Gen., Noct., I, 124, *Gortyna*.
1856. Wlk., C. B. Mus., Het., IX, 158, *Gortyna*.
1869. Pack., Guide to Study Insects, 310, f. 241, *Gortyna*.
1869. Riley, 1st Rept. Ins. Mo., 92, larva.
1870. Riley, Amer. Ent., I, 22, f. 11, larva.
1872. Le Baron, 3d Rept. Ins. Ill., 141, f. 1 and 2, larva.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 111, *Hydræcia*.
1875. Pack., 9th Ann. Rept. Geol. Surv., 719, pl. 65, f. 6, *Gortyna*.
1876. Riley, 8th Rept. Ins. Mo., 37, larva.
1878. French, 7th Rept. Ins. Ills., 221, larva.
1880. Riley, Amer. Ent., III, 201, f. 107, *Gortyna*.
1883. Saund., Fruit Insects, 334, f. 347, 348, *larva*.
1883. Osborn, Can. Ent., XV, 174, larval habits.
1884. Lint., 1st Rept. New York State Ent., 110, f. 26, larva.

var. **nebris** Gn.*

1852. Gn., Spec. Gen., Noct., I, 124, *Gortyna*.
1856. Wlk., C. B. Mus., Het., IX, 157, *Gortyna*.
1878. Graef, Bull. Bkln. Ent. Soc., I, 7, pr. var.
1881. Riley, Papilio, I, 107, habits and var.
1881. Riley, Index and Supplt. to Mo. Repts., 56, pr. syn.

HABITAT.—Canada to Georgia, west to the Rocky Mountains; Eastern States in September.

Types of both forms are in the British Museum. I have given an unusually large, yet far from complete, economic bibliography, because I happened to have the references convenient.

H. necopina Grt.

1876. Grt., Can. Ent., VIII, 25, *Gortyna*.

HABITAT.—New York.

The type is in the British Museum and is like *nitela* save that it lacks the white, transverse line.

H. serrata Grt.

1880. Grt., No. Amer. Ent., I, 94, *Gortyna*.
1881. Grt., Bull. Geol. Surv., VI, 269, *Gortyna*.

HABITAT.—Colorado.

The type is in the Graef collection.

Genus **GORTYNA** Ochs.
1816. Ochs., Schmett. Eur., IV, 82.

G. sauzalitæ Grt.

1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 216, *Ochria*.
1875. Grt., Stett. Ent. Zeit., XXXVI, 342, *Ochria*.
1881. Grt., Bull. Geol. Surv., VI, 269, *Ochria*.
purpurifascia ‡ Grt.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 142, *Ochria*.
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 216, pr. syn.

HABITAT.—California.

The type is in the British Museum, and I confess I can not see the slightest difference between it and the type of *harrisii*. There may be a clypeal modification; but I could not see it, nor could I examine closely enough to make sure it was not there. There is also a specimen of *Arzama obliquata*, marked *O. sauzalitæ*, in Mr. Grote's writing; but this is almost undoubtedly due to some accidental transposition of labels.

G. buffaloensis Grt.

1877. Grt., Can. Ent., IX, 88, *Ochria*.
1881. Grt., Bull. Geol. Surv., VI, 269, *Ochria*.

HABITAT.—Buffalo, New York.

The type is in the British Museum and has all the fascies of an *Hydrœcia*. I could not examine the clypeal structure sufficient to make out any modifications if such exist.

Genus **ACHATODES** Gn.
1852. Gn., Spec. Gen., Noct., I, 132.

A. zeæ Harris.

1841. Harris, Ins. Inj. to Veg., 1st ed., 319, *Gortyna*.
1862. Harris, Ins. Inj. to Veg., Flint ed., 439, pl. 7, f. 9, *Gortyna*.
1864. Grt., Proc. Ent. Soc. Phil., III, 540, *Achatodes*.

1883. Hy. Edw., Papilio III, 134, *Achatodes.*
sandix Gn.
1852. Gn., Spec. Gen., Noct. I, 132, pl. 6, f. 4, *Achatodes.*
1856. Wlk., C. B. Mus., Het., IX, 166, *Achatodes.*
1860. H. Sch., Corr. Blatt, 1863, 73, *Achatodes.*
1864. Grt., Proc. Ent. Soc. Phil., III, 540, pr. syn.

HABITAT.—Canada; Northern, Middle, Central, and Southern States; Colorado; Northern and Eastern States in July and August.

Guenée's type is in the British Museum and is correctly referred to our common species.

Genus **EUTHISANOTIA** Hbn.

1823. Hbn., Zutræge, III, 39.

E. timais Cram.*

1782. Cram., Lep. Exot., III, 148, pl. 275, *B. Phalæna.*
1823. Hbn., Zutræge, III, 39, No. 295, f. 589–590, *Euthisanotia.*
1816. Hbn., Verzeichniss, 211, *Xanthopastis.*
1852. Gn., Spec. Gen., Noct., I, 116, *Glottula.*
1856. Wlk., C. B. Mus., Het., IX, 142, *Euthisanotia.*
1868. H. Sch., Corr. Blatt, 1868, Ins. Cuba, 8, *Euthisanotia.*
1886. Gundlach, Cont. Ent. Cub., 303, *Euthisanotia.*
regnatrix Grt.
1863. Grt., Proc. Ent. Soc. Phil., II, 399, pl. II, f. 4, *Philochrysa.*
1863. Grt., Proc. Ent. Soc. Phil., II, 441, pr. syn.

HABITAT.—Florida; Atlantic coast, occasional to New York.

Genus **NOROPSIS** Gn.

1852. Gn., Spec. Gen., Noct., I, 117

N. hieroglyphica Cram.

1779. Cram., Pap. Exot., II, pl. 147, f. *D. Phalæna.*
1856. Wlk., C. B. Mus., Het., IX, 145, *Euglyphia.*
festiva Fabr.
1781. Fabr., Spec. Ins., II, 194, *Bombyx.*
1787. Fabr., Mant. Ins., II, 127, 157, *Bombyx.*
1792. Fabr., Ent. Syst., III, 1, 463, *Bombyx.*
1793. Gmel., ed. XIII, Linn., Syst. Nat., I, 5, 2425, *Bombyx.*
1808. Oliv., Enc. Meth., V, 85, *Bombyx.*
1856. Wlk., C. B. Mus., Het., IX, 145, pr. syn.
elegans Hbn.
1810. Hbn., Samml. Ex. Schmett., I, Lep. IV, Noct. f. 1–4, *Diphthera.*
1816. Hbn., Verzeichniss, 203, *Euglyphia.*
1856. Wlk., C. B. Mus., Het., IX, 145, pr. syn.
fastuosa Gn.
1852. Gn., Spec. Gen., Noct., I, 117, *Noropsis.*
1856. Wlk., C. B. Mus., Het., IX, 145, pr. syn.

HABITAT.—Texas; Florida.

This is a decidedly aberrant creature for our fauna and an intruder from a Southern clime. It has been bred in Texas, however, and must, I presume, be added. The synonymy and bibliography is after Walker.

Genus **BELLURA** Wlk.

1865. Wlk., C. B. Mus., Het., xxxii, 465..

Our good friend Walker still influences our catalogues. *Bellura* was described about 200 pages before *Arzama* in the same volume, and as the types of *Bellura* and *Arzama* are the same species, the former will have to be used, even though it was placed in the Bombycidæ and was said to be related to *Datana*.

B. gortynides Wlk.*

1865. Wlk., C. B. Mus., Het., xxxii, 465, *Bellura*.
densa Wlk.
1865. Wlk., C. B. Mus., Het., xxxii, 645, *Arzama*.
1868. H. Sch., Corr. Blatt, 1868, Ent. Cub., 16, *Arzama*.
1868. G. & R., Trans. Am. Ent. Soc., i, 340, *Arzama*.
1886. Gundlach, Cont. Ent. Cub., 325, *Arzama*.
vulnifica Grt.
1872 Grt., Trans. Am. Ent. Soc., iv, 294, *Arzama*.
melanopyga Grt.
1881. Grt., Papilio, i, 148, *Arzama*.
1881. Comstock, Papilio, i, 148, larva in lily.

Habitat.—Canada, southward to Florida; west to the Mississippi States.

The types of Walker's species are in the British Museum, which also contains specimens of Mr. Grote's species not marked type. Where the original types are I can not say. Prof. Comstock may have that of *melanopyga*. Walker's species are exactly alike save as to degree of imperfection, and I can not make anything different out of *vulnifica*. The characters given by Mr. Grote for *melanopyga* are very feeble and are evanescent in character, a fact which he has realized to the extent of citing it a variety in his revised list of 1890.

B. diffusa Grt.

1878. Grt., Bull. Geol. Surv., iv, 179, *Arzama*.

Habitat.—Canada; Maine.

I have not seen the type of this species.

B. obliqua Wlk.*

1865. Wlk., C. B. Mus., Het., xxxii, 428, *Edema*.
1882. Grt., Ill. Essay, 42, = *Sphida obliquata*.
obliquata G. & R.
1868. G. & R., Trans. Am. Ent. Soc., i, 339, pl. 6, f. 47, *Arzama*.
1878. Grt., Bull. Geol. Surv., iv, 179, *Sphida*.
1878. Worth., Can. Ent., x, 15, larva.
1883. Grt., Proc. Am. Phil. Soc., xxi, 157, *Sphida*.
1883. Kellicott, Can. Ent., xv, 174, larval habit.
1883. Riley, Can. Ent., xv, 176, larval habit.
1888. Brehme, Can. Ent., xx, 119, life history.
1889. Kellicott, Can. Ent., xxi, 39, larva.
1889. Brehme, Can. Ent., xxi, 78, larval habits.

1889. Johnston, Can. Ent., xxi, 79, larval habits.
1889. Moffat, Can. Ent., xxi, 99, larva.
1889. Beutenmueller, Can. Ent., xxi, 160, larva.

HABITAT.—Canada in July; south to Florida, west to the Mississippi Valley; Colorado; Massachusetts in June; New Jersey in October, May and June.

Walker's type is in the British Museum. Mr. Grote's is in the Collection American Entomological Society. They are identical, as Mr. Grote has already stated.

Genus **NONAGRIA** Ochs.

1816. Ochs., Schmett. Eur., iv, 82.

N. permagna Grt.

1883. Grt., Papilio, iii, 73, *Nonagria.*

HABITAT.—Indian River, Florida.

The type is in Mr. Neumœgen's collection.

N. laeta Morr.

1875. Morr., Proc. Bost. Soc. N. H., xviii, 120, *Nonagria.*
1882. Grt., Papilio, ii, 95, *Nonagria.*

HABITAT.—Hoboken, New Jersey.

I have not seen the type of this species and do not know where it is. I am distinctly suspicious of species of about that date, said to have been taken at Hoboken, New Jersey. There were one or two collectors at that place who distributed extra limital species without locality labels, asserting that they were from that region. Most of them were soon detected; but I believe it will be found that Mr. Morrison has described at least two of them.

N. subflava Grt.*

1882. Grt., Papilio, ii, 95, *Nonagria.*
1882. Grt., Bull. Geol. Surv., vi, 583, *Nonagria.*

HABITAT.—Illinois; Massachusetts; Maine.

I have not seen the type, which may be with Dr. Thaxter.

N. oblonga Grt.

1882. Grt., Papilio, ii, 96, *Nonagria.*

HABITAT.—Kittery Point, Maine.

The type is probably with Dr. Thaxter.

N. subcarnea Kellicott.*

1883. Kellicott, Can. Ent., xv, 175, *Nonagria.*
1884. Kellicott, Bull. Bkln. Ent. Soc., vii, 86, *Nonagria.*
1884. Kellicott, Can. Ent., xvi, 170, *Nonagria.*
1885. Kellicott, Bull., Buff. Soc. Nat. Sci., v, 40, *Nonagria.*

HABITAT.—Buffalo, New York.

The types are with Dr. Kellicott.

N. inquinata Gn.

1852. Gn., Spec. Gen., Noct., I, 104, *Nonagria*.
1856. Wlk., C. B. Mus., Het., IX, 128, *Nonagria*.
1882. Grt., Papilio, II, 91, *Nonagria*.

HABITAT.—New York.

This species should be in the British Museum, but I failed to find it. In view of the fact that both of the other species are referable to *Senta*, rather than *Nonagria*, it is not unlikely that Guenée had before him something very like *S. defecta* Grt. The small size—21 mm., would favor this view; but it will need more material than I have at command at present to decide this.

Genus **SENTA** Steph.

1829. Steph., Ill. Br. Ent., Haust., III, 279.

S. defecta Grt.

1874. Grt., 6th Rept. Peab. Ac. Sci., 29, *Senta*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, pl. I, f. 4, *Senta*.

HABITAT.—Massachusetts; New York; Maryland; Eastern, Middle, and Central States.

The type is in the British Museum. I believe this may be found to be the *Nonagria inquinata* of Guenée.

S. enervata Gn.

1852. Gn., Spec. Gen., Noct., I, 105, *Nonagria*.
1856. Wlk., C. B. Mus., Het., IX, 128, *Nonagria*.
1882. Grt., Papilio, II, 95, *Nonagria*.
fodiens Gn.
1852. Gn., Spec. Gen., Noct., I, 105, *Nonagria*.
1856. Wlk., C. B. Mus., Het., IX, 128, *Nonagria*.
1882. Grt., Papilio, II, 95, *Nonagria*.

HABITAT.—Florida.

The types are in the British Museum and are sexes of the same species. They are not congeneric with *Nonagria typhæ;* but appear to be congeneric with *Senta defecta*. The body is quite robust, the eyes are naked, front smooth, without tubercle, and the male antennæ simple. In color the specimens are blackish, with little or no ornamentation. I never saw the like of them before.

Genus **FOTA** Grt.

1882. Grt., Can. Ent., XIV, 174.

F. armata Grt.

1882. Grt., Can. Ent., XIV, 175 et 181, *Fota*.
1883. Grt., Proc. Am. Phil. Soc., XXI, 169, *Fota*.

HABITAT.—Arizona.

F. minorata Grt.

1882. Grt., Can. Ent., XIV, 181, *Fota*.
1883. Grt., Proc. Am. Phil. Soc., XXI, 169, *Fota*.

HABITAT.—Arizona.

Both of the above species are described out of Mr. Neumoegen's collection, and Mr. Grote gave me types of each, which are now in the National Museum. The genus has little in common with those with which it is associated; but I leave it where Mr. Grote put it until critical study develops a better place for it.

Genus **PLATYSENTA** Grt.

1874. Grt., 6th Rept. Peab. Ac. Sci., 28.

P. videns Gn.*

1852. Gn., Spec. Gen., Noct., I, 78, *Leucania*.
1882. Grt., Ill. Essay, 42, = *atriciliata*.
indigens Wlk.
1857. Wlk., C. B. Mus., Het., XI, 712, ? *Nonagria*.
1882. Grt., Ill. Essay, 42, pr. syn.
meskei Speyer.
1875. Speyer, Stett. Ent. Zeit., XXXVI, 116, *Caradrina*.
1882. Grt., New List, 30, ? pr. syn.
atriciliata Grt.
1874. Grt., 6th Rept. Peab. Ac. Sci., 28, *Platysenta*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, pl. 1, f. 2, *Platysenta*.

HABITAT.—Massachusetts in June and July, to Florida, west to the Mississippi Valley; Colorado; Illinois in August; District of Columbia in July, August, and September.

Guenée's type is in the British Museum, and is unquestionably the same as Mr. Grote's species. Walker's type I did not see, but Mr. Grote did, and is positive in referring it to *atriciliata*. I made a regrettable error in identifying *Monodes nucicolora* Gn., with this species.

P. angustiorata Grt.*

1882. Grt., Bull. Geol. Surv., VI, 584, *Platysenta*.

HABITAT.—Colorado.

Mr. Grote gave me a specimen marked type, which is now in the National Museum.

Genus **TAPINOSTOLA** Led.

1857. Lederer, Noct. Eur., 123.

T. variana Morr.

1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 132, *Tapinostola*.

HABITAT.—Detroit, Michigan.

The type should be, and probably is, in the Museum of Comparative Zoölogy at Cambridge; but I did not see it there.

T. orientalis Grt.

1882. Grt., Bull. Geol. Surv., VI, 583, *Tapinostola*.

HABITAT.—Kittery Point, Maine; Buffalo, New York.

I have seen the type specimens in Dr. Thaxter's collection, and have identified the species from Buffalo, New York. Dr. Thaxter thought it probably a variety of *variana*. Mr. Neumœgen also has a "type."

Genus **OMMATOSTOLA** Grt.

1873. Grt., Bull. Buff. Soc. Nat. Sci., II, 112.

O. lintneri, Grt.

1873. Grt., Bull. Buff. Soc. Nat. Sci., II, 112, *Ommatostola*.

HABITAT.—New York; Anglesea, New Jersey.

Types are in Dr. Lintner's collection and in the British Museum.

Genus **LEUCANIA** Ochs.

1816. Ochs., Schmett. Eur., IV, 81.

L. pallens Linn.

1761. Linn., Fauna Suec., 1175, *Noctua*.
1767. Linn., Syst. Nat., ed. XII, ii, 838, *Noctua*.
1759. Clk., Icones, t. 4, f. 6, *Phalæna*.
1781. Fabr., Spec. Ins., II, 214, *Noctua*.
1787. Fabr., Mant. Ins., II, 139, *Noctua*.
1816. Hbn., Verzeichniss, 241, *Leucania*.
1852. Gn., Spec. Gen., Noct., I, 92, *Leucania*.
1856. Wlk., C. B. Mus., Het., IX, 91, *Leucania*.
1875. Speyer, Stett. Ent. Zeit., XXXVI, 112, *Leucania*.

HABITAT.—Canada; United States generally, except Southern States, June to September.

The bibliography of older and European authors is incomplete and reference should be had to Staudinger and Walker for other citations. In American literature I have found nothing worthy of remark. I have seen this species, or something very closely allied to it, from California.

L. oxygale Grt.

1881. Grt., Can. Ent., XIII, 14, *Heliophila*.

HABITAT.—Colorado.

The type is in the British Museum. I have a specimen carefully compared with it. Another specimen, also marked type, is in the Tepper collection.

L. prægracilis Grt.

1877. Grt., Bull. Geol. Surv., III, 119, *Heliophila*.

HABITAT.—Idaho, July 6; Colorado; New Mexico.

I have not seen the type of this species, and do not know certainly where it is. In the Cambridge collection is a specimen marked *Heliophila gracillima* type; but I find no such species described. Is it possible that Mr. Grote's description was intended for this insect? It is not unlikely, for the description applies fairly well. Mr. Thaxter has marked it "*bicolorata*" and the two are very nearly related if not identical.

L. bicolorata Grt.

1881. Grt., Papilio, I, 154, *Heliophila*.

HABITAT.—Tucson, Arizona; Colorado; New Mexico.

The type is with Mr. Neumœgen, and is, as already suggested, a close ally of the preceding.

L. patricia Grt.

1880. Grt., Bull. Bkln. Ent. Soc., III, 46, *Heliophila.*

HABITAT.—Colorado; Las Vegas, New Mexico.

The type is in the Tepper collection. Mr. Meeske collected it in some numbers at Las Vegas, New Mexico. It does not look like *Leucania* at first sight, from its slender form and the clear white median stripe.

L. pertracta Morr.

1875. Morr., Proc. Bost. Soc. N. H., XVIII, 120, *Heliophila*

HABITAT.—Pennsylvania.

The type is in Mr. Strecker's collection.

L. rubripennis G. & R.*

1870. G. & R., Trans. Am. Ent. Soc., III, 179, pl. 2, f. 77, *Leucania.*

HABITAT.—Texas in August.

A specimen marked "Type" is in the British Museum.

L. rufostriga Pack.

1866. Pack., Proc. Bost. Soc. N. H., XI, 36, *Leucania.*

HABITAT.—Caribou Island; Labrador.

The type is probably in the Cambridge collection. I have no note of seeing it while at Salem; but the material was then in such a confused shape that it was easy to overlook specimens.

L. albilinea Hbn.*

1816. Hbn., Samml. Ex. Schmett., 25, ff., 337, 338.
1816. Hbn., Verzeichniss, 241, *Leucania.*
1852. Gn., Spec. Gen., Noct., I, 89, *Leucania.*
1856. Wlk., C. B. Mus., Het., IX, 99, *Leucania.*
1877. Riley, 9th Rept. Ins. Mo., 50, f., 14, 15, all stages.
1880. Grt., Can. Ent., XII, 116, *Leucania.*
diffusa Wlk.
1856. Wlk., C. B. Mus., Het., IX, 91, *Leucania.*
1882. Grt., Ill. Essay, 42, pr. syn.
moderata Wlk.
1856. Wlk., C. B. Mus., Het., IX, 114, *Leucania.*
harveyi Grt.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 9, pl. I, f. 14, *Leucania.*
1876. Harv., Bull. Buff. Soc. Nat. Sci., III, 8, *Leucania.*
1880. Grt., Can. Ent., XII, 116, an sp. dist.?

HABITAT.—Nova Scotia; Canada, in August; United States east of the Rocky Mountains; Northern and Middle States in August; Texas in March and April; Colorado; New Mexico.

The types of *diffusa*, *moderata*, and *harveyi* are all in the British Museum, and all refer to *albilinea*, or what Guenée has identified as such—correctly, I think. The economic bibliography is large.

L. ligata Grt.*

1875. Grt., Trans. Am. Ent. Soc., v, 115, *Heliophila.*
1879. Strk., Rept. Chief Eng., 1878–'79, v, p. 1862, *Leucania.*

HABITAT.—Texas in March to November; Colorado, July 31; Florida in March.

The type is in the British Museum.

L. dia Grt.*

1879. Grt., Can. Ent., XI, 29, *Heliophila.*
1882. Grt., Ill. Essay, 56, pl. II, f. 19, *Heliophila.*

HABITAT.—California.

The type is in the Bailey collection.

L. extincta Gn.

1852. Gn., Spec. Gen., Noct., I, 79, *Leucania.*
1856. Wlk., C. B. Mus., Het., IX, 91, *Leucania.*
linita Gn.
1852. Gn., Spec. Gen., Noct., I, 81, *Leucania.*
1856. Wlk., C. B. Mus., Het., IX, 95, *Leucania.*
1891. Smith, List Lepidoptera, 16, pr. syn.
scirpicola Gn.
1852. Gn., Spec. Gen., Noct., I, 81, *Leucania.*
1856. Wlk., C. B. Mus., Het., IX, 96, *Leucania.*
1891. Smith, List Lepidoptera, 16, pr. syn.
amygdalina Harv.
1878. Harv., Can. Ent., X, 57, *Heliophila.*

HABITAT.—Maine to Texas; Florida.

All the types are in the British Museum and without any question refer to one species only. *Insueta*, on the other hand, is a distinct species.

L. multilinea Wlk.*

1856. Wlk., C. B. Mus., Het., IX, 97, *Leucania.*
1875. Grt., Proc. Ac. Nat. Sci., 1875, 419, = *commoides.*
lapidaria Grt.
1875. Grt., Proc. Ac. Nat. Sci. Phil., 1875, 419, *Heliophila.*

HABITAT.—Canada; New York in July and August.

Both types are in the British Museum and refer to the same species. Mr. Grote referred *multilinea* as a synonym of *commoides* on the faith of a specimen determined by Walker in a Canadian collection; but Walker's determinations, even of his own species, are absolutely untrustworthy.

L. phragmatidicola Gn.*

1852. Gn., Spec. Gen., Noct., I, 89, *Leucania.*
1856. Wlk., C. B. Mus., Het., IX, 97, *Leucania.*
var texana Morr.
1874. Morr., Proc. Bost. Soc. N. H., XVII, 211, *Heliophila.*

HABITAT.—Canada in August, to Texas; United States east of the Rocky Mountains; Colorado; New Mexico; Texas, March, April, July, September, October; New York in June to September.

The type of the species is in the British Museum and I have a carefully compared specimen. I have not seen Mr. Morrison's variety, which may be another species, probably represented in the National Museum.

L. juncicola Gn.

1852. Gn., Spec. Gen., Noct., I, 83, *Leucania*.
1856. Wlk., C. B. Mus., Het., IX, 96, *Leucania*.
adjuta Grt.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 158, *Heliophila*.
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 8, *Heliophila*.

HABITAT.—Alabama; Texas in March.

Mr. Grote's type is in the British Museum, where there is also a specimen named *juncicola*, apparently determined by Guenée. Guenée credits the species to Boisduval, but describes it himself for the first time. The specimen agrees well with the description and may, I think, be fairly considered as representative of *juncicola* which, then, is the same as *adjuta*.

L. farcta Grt.

1881. Grt., Can. Ent., XIII, 15, *Heliophila*.

HABITAT.—California.

The type is in the British Museum. I have a compared specimen almost exactly like it.

L. insueta Gn.

1852. Gn., Spec. Gen., Noct., I, 81, *Leucania*.
1856. Wlk., C. B. Mus., Het., IX, 95, *Leucania*.
1877. Grt., Can. Ent., IX, 28, = *commoides*.
adonea Grt.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 159, *Heliophila*.

HABITAT.—Nova Scotia; Canada in July; New York, June to August; Colorado.

Both the types are in the British Museum and refer to the same species. *Insueta* is a somewhat darker form; but not otherwise different. Mr. Grote's reference to *commoides* was based on determinations made by Walker, and that was a very unsafe basis. I have specimens compared with the types.

L. commoides Gn.

1852. Gn., Spec. Gen., Noct., I, 86, *Leucania*.
1856. Wlk., C. B. Mus., Het., IX, 96, *Leucania*.
1875. Speyer, Stett. Ent. Zeit., XXXVI, 113, *Leucania*.

HABITAT.—Nova Scotia; Canada; New York, June to August; Wisconsin; Minnesota; Illinois; Colorado; New Mexico; Florida in March.

The type is in the British Museum and is the species so named in American collections.

L. flabilis Grt.

1881. Grt., Can. Ent., XIII, 15, *Heliophila*.

HABITAT.—Long Island, New York.

Types are in the Tepper collection and in the British Museum. The species was described from material taken by Mr. Tepper.

L. rimosa Grt.*

1882. Grt., Can. Ent., XIV, 216, *Heliophila*.

HABITAT.—Kittery Point, Maine.

The type is with Dr. Thaxter.

L. unipuncta Haw.*

1810. Haw., Lep. Britt., II, 177, *Noctua*.
1829. Steph., Ill. Brit. Ent., Haust., III, 80, *Noctua*.
1862. Flint, in Harris, Inj. Ins., 627, f. 274, 275, 276, *Leucania*.
1864. Grt., Proc. Ent. Soc. Phil., III, 540, *Leucania*.
1870. Riley, 2d Rept. Ins. Mo., 37, ff. 11, 14–16, *Leucania*.
1871. Riley, Amer. Ent., I, 215, ff. 152–154, *Leucania*.
1876. Riley, 8th Rept. Ins. Mo., 22, 184, 215, *Leucania*.
1883. Riley, 3d Rept. U. S. Ent. Comm., 89–156, *Leucania*.
extranea Gn.
1852. Gn., Spec. Gen., Noct., I, 77, *Leucania*.
1856. Wlk., C. B. Mus., Het., IX, 93, *Leucania*.

HABITAT.—Canada to Florida and Texas, west to the Rocky Mountains; Colorado; New Mexico; throughout the season.

For the full bibliography of this insect to 1881, reference should be had to the Third Report of the U. S. Entomological Commission, where more than eight pages of titles are given. Were the bibliography since that time collected with equal completeness it would fill eight pages more.

L. subpunctata Harv.

1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 8, *Heliophila*.

HABITAT.—Texas in March.

The type is in the British Museum. I have a specimen carefully compared with it.

L. pilipalpis Grt.

1875. Grt., Proc. Bost. Soc. N. H., XVIII, 415, *Heliophila*.

HABITAT.—Apalachicola, Florida.

I have seen the type in Dr. Thaxter's collection. It is a peculiar and very distinct species, which I have not had since.

L. pseudargyria Gn.*

1852. Gn., Spec. Gen., Noct., I, 71, *Leucania*.
1856. Wlk., C. B. Mus., Het., IX, 77, *Mythimna*.
1874. Caulfield, Can. Ent., VI, 132, *Leucania*, larva.
1875. Speyer, Stett. Ent. Zeit., XXXVI, 113, *Leucania*.
1881. French, Can. Ent., XIII, 24, larva.

var **obusta** Gn.

1852. Gn., Spec. Gen., Noct., I, 74, *Leucania*.
1856. Wlk., C. B. Mus., Het., IX, 77, *Mythimna*.
1882. Grt., Ill. Essay, 40, ? pr. syn.
callida Grt.
1882. Grt., New List, 30, in note, var. pr.

HABITAT.—Canada in July and August to Texas; east of Rocky Mountains; Colorado; New Jersey in April and June; New York, May to August.

Guenée's types are in the British Museum. *Obusta* is undoubtedly the red form of *pseudargyria*, and just exactly what Mr. Grote named *callida*.

L. ebriosa Gn.

1852. Gn., Spec. Gen., Noct., I, 74, pl. 3 f. 1, *Leucania*.
1856. Wlk., C. B. Mus., Het., IX, 70, *Mythimna*.
1882. Grt., Ill. Essay, 40, *Mythimna*.

HABITAT.—"Am. Sept."

A curious species to be an American insect. The eyes are hairy, antennæ serrate and bristled, "brush-like," the wings short, resembling *Scopelosoma*, color carmine red. If from America at all, it is probably from Florida, of Doubleday's material.

Genus **ZOSTEROPODA** Grt.

1874. Grt., Bull. Buff. Nat. Sci., II, 67.

Z. hirtipes Grt.*

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 68, *Zosteropoda*.
1875. Grt., Can. Ent., VII, 25, *Zosteropoda*.
1882. Grt., Ill. Essay, 56, pl. 2, f. 20, *Zosteropoda*.

HABITAT.—California, March, April, July, and September.

A type is in the Edwards collection. Another is in the British Museum.

Genus **UFEUS** Grt.

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 101.

U. sagittarius Grt.

1883. Grt., Papilio, III, 31, *Ufeus*.
1883. Grt., Proc. Am. Phil. Soc., XXI, 170, *Ufeus*.

HABITAT.—California.

The type is in the Neumœgen collection.

U. plicatus Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 102, *Ufeus*.
1873. Grt., Proc. Bost. Soc. Nat. Hist., XVI, 241, *Ufeus*.
1883. Grt., Proc. Am. Phil. Soc., XXI, 170, *Ufeus*.

HABITAT.—Canada; Pennsylvania; Colorado; California.

The type should be in the collection of the American Entomological Society, but I have not found it there.

U. unicolor Grt.*

1878. Grt., Bull. Geol. Surv., IV, 179, *Ufeus*.
1883. Grt., Proc. Am. Phil. Soc., XXI, 170, *Ufeus*.

HABITAT.—Illinois; Colorado.

The type is in the British Museum.

U. satyricus Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 101, pl. 3, f. 4, *Ufeus*.
1883. Grt., Proc. Am. Phil. Soc., XXI, 170, *Ufeus*.

HABITAT.—Canada in July; New York; Pennsylvania; Illinois, February.

The type is in Dr. Lintner's collection.

Genus **PTEROSCIA** Morr.

1874. Morr., Proc. Bost. Soc. N. H., XVII, 155.

P. atrata Morr.

1874. Morr., Proc. Bost. Soc. N. H., XVII, 156, *Pteroscia*.

HABITAT.—Mount Washington, N. H., July 5 and 7.

The type is in the British Museum from the Grote collection. It is a roughly clothed, dull, smoky-brown species, with broad wings and simple male antennæ. The only obvious marking is a dentate, pale, exterior transverse line. I had not seen it before.

Genus **SCOLECOCAMPA** Gn.

1852. Gn., Spec. Gen., Noct., I, , 131.

S. liburna Geyer.*

1823. Geyer, Zutræge, 182, ff. 963. 964, *Clytie*.
1858. Wlk., C. B. Mus., Het., XIV. 1364, *Pseudophia*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 20, *Scolecocampa*.
1875. Grt., Proc. Bost. Soc. N. H., XVIII, 415, *Scolecocampa*.
1881. Grt., Can. Ent., XIII, 91, *Scolecocampa*.
1883. Hy. Edw., Papilio, III, 134, larva.
ligni Gn.
1852. Gn., Spec. Gen., Noct., I, 131, pl. 6, f. 3, *Scolecocampa*.
1856. Wlk., C. B. Mus., Het., IX, 166, *Scolecocampa*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 20, pr. syn.

HABITAT.—Canada to Florida; east of the Rocky Mountains; Eastern and Northern States, in July.

The larva lives in decaying chestnut and oak stumps, and the range given embraces only such portions of it as afford the food plants. Guenée's types are at the Jardin des plantes and in the Boisduval collection with M. Oberthür. I did not see the specimen in the Paris Museum.

Genus **EUCALYPTERA** Morr.

1875. Morr., Ann. Lyc. Nat. Hist., N. Y., XI, 104,

E. bipuncta Morr.*

1875. Morr., Ann. Lyc. Nat. Hist., N. Y., XI, 104, *Eucalyptera*.
1878. Grt., Bull. Geol. Surv., IV, 179, *Scolecocampa*.
1880. Grt., Bull. Bkln. Ent. Soc., III, 38, *Scolecocampa*.
1882. Smith, Bull. Bkln. Ent. Soc., V, 6, *Eucalyptera*.
1883. Smith, Can. Ent., XV, 230, *Eucalyptera*.

HABITAT.—Massachusetts to Florida, along the coast.

The type is in the Tepper collection.

E. obscura Grt.

1883. Grt., Can. Ent., xv, 7, *Scolecocampa.*
1890. Grt., Revised Check List, 22, *Eucalyptera.*

HABITAT.—Arizona.

The type is in the Neumoegen collection.

Genus **DORYODES** Gn.

1857. Gn., Spec. Gen., Phal., II, 233.

D. bistrialis Geyer.*

1823. Geyer, Zutraege, 388, ff. 775, 776, *Agriphila.*
1878. Grt., Bull. Geol. Surv., IV, 179, *Doryodes.*
1881. Grt., Can. Ent., XIII, 91, *Doryodes.*
acutaria H-Sch.
1856. H-Sch., Lep. Ex., Suppl., 74, f. 447, *Ligia.*
1857. Gn., Spec. Gen., Phal., II, 233, pl. 17, f. 6, *Doryodes.*
1858. Wlk., C. B. Mus., Het., XVI, 73, ‡ *D. acutalis.*
1860. Clem., Proc. Ac. Nat. Sci. Phil., 1860, 251. *Doryodes.*
1878. Grt., Bull. Geol. Surv., IV, 179, pr. syn.
divisa Wlk.
1863. Wlk., C. B. Mus., Het., XXVII, 187, *Thermma.*
promptella Wlk.
1863. Wlk., C. B. Mus., Het., XXVII, 196, *Tanza.*

HABITAT.—Eastern, Middle, and Western States; Florida; Maine and Massachusetts, in August; Kansas in September.

The Walker types are in the British Museum, and were described as Crambids, while Guenée considered the species Geometrid.

D. spadaria Gn.

1857. Gn., Spec. Gen., Phal., II, 234, *Doryodes.*
1862. Wlk., C. B. Mus., Het., XXIV, 1148, *Doryodes.*

HABITAT.—Florida.

I have not seen the type; nor have I made any effort to identify the species.

Genus **PHIPROSOPUS** Grt.

1872. Grt., Trans. Am. Ent. Soc., IV, 90.

P. callitrichoides Grt.*

1872. Grt., Trans. Am. Ent. Soc., IV, 90, *Phyprosopus.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 170, *Sudariophora.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 29, *Sudariophora.*
1876. Grt., Can. Ent., VIII, 205, *Phiprosopus.*
acutalis ‡ Wlk.
1858. Wlk., C. B. Mus., Het., XVI, 73, *Doryodes.*
1872. Grt., Trans. Am. Ent. Soc., IV, 91, pr. syn.
nasutaria Zell.
1872. Zell., Verh. k. k. Zoöl.-bot. Ges., 1872, 490, t. 2, f. 11, *Sudariophora.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 170, pr. syn.

HABITAT.—New York to Texas, in May.

Mr. Grote's type is in the British Museum, and so, probably, is Zeller's, though I did not see the latter. Mr. Grote was quite correct in citing Walker's *acuialis* to this species.

Genus **AMOLITA** Grt.

1874. Grt., Bull. Buff. Soc. Nat. Sci., II. 158.

A. fessa Grt.*

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 158, *Amolita.*

HABITAT.—Massachusetts, in July, to Texas; Colorado; District of Columbia, in June; Florida, in March.

The type is in the British Museum.

Genus **CILLA** Grt.

1880. Grt., No. Am. Ent., I, 100.

C. distema Grt.*

1880. Grt., No. Am. Ent., I, 100, *Cilla.*

HABITAT.—Texas, May to August.

The type is in the British Museum.

Genus **BALSA** Wlk.

1860. Wlk., Can. Nat. and Geol., V, 250.

B. malana Fitch.*

1856. Fitch, 1st and 2d Rept. Ins. N. Y., 244, pl. III, f. 5, *Brachytænia.*
1872. Zell., Verh. k. k., Zoöl.-bot. Ges., XXII, 451, *Nola.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 169, *Nolophana.*
1883. Saund., Fruit Insects, 101, f. 98, larva.
1883. Grt., Proc. Am. Phil. Soc., XXI, 159, *Nolophana.*
obliquifera Wlk.
1860. Wlk., Can. Nat. and Geol., V, 251, *Balsa.*
1877. Grt., Can. Ent., IX, 29, pr. syn.

HABITAT.—Canada, in July, to Georgia; Wisconsin; Central States; New York, in June to August.

Mr. Grote in Can. Ent., IX, 29, cites *Balsa obliquifera* Wlk., as a synonym of this species after an examination of the type in the collection of the Entomological Society of Ontario. Mr. Walker has thus given us three generic names for this genus—*Balsa*, *Gargaza*, and *Cutina*, all of which antedate *Nolophana* Grote.

B. triquetrana Fitch.

1856. Fitch, 1st and 2d Rept. Ins. N. Y., 244, *Brachytænia.*
1872. Zell., Verh. k. k. Zoöl-bot. Ges., XXII, 457, *Nola.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 169, *Nolophana.*

HABITAT.—Middle States.

B. tristrigella Wlk.*

1865. Wlk., C. B. Mus., Het., XXXV, 1734, *Gargaza.*
zelleri Grt.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 169, *Asisyra.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 159, *Nolophana.*
malana ‡ Zell.
1872. Zell., Verh. k. k. Zoöl.-bot. Ges., XXII, 451, *Nola.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 169, =*zelleri.*

HABITAT.—Massachusetts in April and May; New York, in June and August, to Texas.

Walker's type is in the British Museum. In the Grote collection are three specimens labeled *zelleri* by Mr. Grote, not types, which agree with the type of *tristrigella*. The locality of the latter is "unknown."

B. labecula Grt.

1880. Grt., Can. Ent., XII, 217, *Nolophana*.

HABITAT.—New York to Texas.

The type is in the British Museum.

Genus **CATABENA** Wlk.

1865. Wlk., C. B. Mus., Het., XXXII, 631.

C. lineolata Wlk.*

1865. Wlk., C. B. Mus., Het., XXXII, 631, *Catabena*.
miscellus Grt.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 181, *Adipsophanes*.
1880. Coquillett, No. Amer. Ent., I, 52, larva.

HABITAT.—Canada in May and July; New York in May and July, to California in May and July.

Both the types are in the British Museum, and refer to the same species. Walker's species was given as "locality unknown."

C. terminellus Grt.

1883. Grt., Can. Ent., XV, 132, *Adipsophanes*.

HABITAT.—Texas.

The type is with Mr. Neumœgen.

Carvanca trisecta Wlk., which is interpolated here in my List of *Lepidoptera*, is *Crambus interminellus* Wlk. Both the types are in the British Museum.

Belonging here, and probably a species of *Nolophana*, is *Cutina albopunctella* Wlk., C. B. Mus., XXXV, 1735, 1866, described as a Pyralid. The species is the generic type, and the description as applied to the specimen is a wonderful production. While I feel quite certain that the specimen is a *Nolophana* or *Balsa*, I would not dare to risk a guess at the species at present.

Genus **CRAMBODES** Gn.

1852. Gn., Spec. Gen., Noct., II, 152.

C. talidiformis Gn.*

1852. Gn., Spec. Gen., Noct., II, 152, pl. 7, f. 12, *Crambodes*.
1857. Wlk., C. B. Mus., Het., XI, 661, *Crambodes*.
1879. Coquillett, No. Amer. Ent., I, 5, larva.
1883. Hy. Edw., Papilio, III, 135, larva.
conjugens Wlk.
1856. Wlk., C. B. Mus., Het., IX, 119, *Carvanca*.
1865. Wlk., C. B. Mus., Het., XXXIII, 762, pr. syn.

HABITAT.—Canada in May, June, and July; Northern, Eastern, Middle, and Central States May to July; Colorado.

The types are in the British Museum. Walker has himself referred his species to the synonymy. His *Carranca trisecta*, C. B. Mus., Het., IX, 119, is *Crambus interminellus*, also described by him.

Genus **FOTELLA** Grt.

1882. Grt., Can. Ent., XIV, 181.

F. notalis Grt.

1882. Grt., Can. Ent., XIV, 181, *Fotella.*

HABITAT.—Arizona.

The type is in Mr. Neumœgen's collection.

Genus **CARADRINA** Ochs.

1816. Ochs., Schmett. Eur., IV, 80.

C. tarda Gn.

1852. Gn., Spec. Gen., Noct., I, 213, *Caradrina.*
1856. Wlk., C. B. Mus., Het., X, 292, *Caradrina.*
1875. Morr., Proc. Bost. Soc. N. H., XVIII, 121, *Caradrina.*

HABITAT.—"North America;" West Virginia.

Guenée's species was described from Boisduval's collection, and the type is now with M. Oberthür, at Rennes. The specimen identified by Mr. Morrison is in the Meyer collection, where I have probably seen it without noting. I can not say, of course, whether the identification is correct.

C. miranda Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 11, 169, *Caradrina.*
1875. Speyer, Stett. Ent. Zeit., XXXVI, 114, *Caradrina.*

HABITAT.—Middle and Central States June to August; Colorado; Utah in June; California in July.

I have not seen the type. The specimens in the British Museum, though from the Grote collection, have no type label.

C. meralis Morr.

1875. Morr., Can. Ent., VII, 215, *Caradrina.*
bilunata Grt.
1877. Grt., Can. Ent., IX, 199, *Caradrina.*
1880. Grt., Bull. Bkln. Ent. Soc., III, 39, pr. syn.
1880. Grt., Can. Ent., XII, 187, pr. syn.

HABITAT.—Northern and Eastern States; Maine; Massachusetts; New Mexico.

The type of *meralis* is in the Tepper collection; that of *bilunata* is with Dr. Thaxter.

C. derosa Morr.

1875. Morr., Proc. Bost. Soc. N. H., XVIII, 121, *Caradrina.*

HABITAT.—New Jersey.

The type is in the Tepper collection. I have not recognized it among the material taken by the New Jersey collectors.

C. multifera Wlk.*

1856. Wlk., C. B. Mus., Het., x, 293, *Caradrina.*
1869. Beth., Can. Ent., I, 85, *Caradrina.*
fidicularia Morr.
1874. Morr., Proc. Bost. Soc. N. H., XVII, 145, *Segetia.*
1876. Grt., Can. Ent., VIII, 188. = *cubicularis.*
1878. Lintner, Ent. Cont., IV, 89, *Caradrina* dist. *cubicularis.*
1882. Grt., Ill. Essay, 16, pr. syn.

HABITAT.—Nova Scotia; Canada in July and August; Maine; New York, August, September; New Jersey; District of Columbia; Illinois; Minnesota.

Walker's type is in the British Museum and is our common form. Mr. Morrison's type I have not seen, nor do I know where it is. Dr. Lintner, in 1878, writes as though from a positive identification of Morrison's species, and I have no doubt the reference is correct.

C. subaquila Harv.

1878. Harv., Can. Ent., x, 57, *Caradrina.*

HABITAT.—Texas.

The type is in the British Museum.

C. conviva Harv.*

1874. Harv., Can. Ent., VIII, 6, *Caradrina.*

HABITAT.—Texas in November.

The type is in the British Museum.

C. fragosa Grt.

1883. Grt., Papilio, III, 76, *Caradrina.*

HABITAT.—Arizona.

The type is in Mr. Neumœgen's collection.

C. extimia Wlk.

1865. Wlk., C. B. Mus., Het., XXXII, 687, *Caradrina.*
civica Grt.
1883. Grt., Papilio, III, 74, *Caradrina.*

HABITAT.—Colorado; California; Vancouver; Oregon.

Walker's type is in the British Museum and Mr. Grote's is in the Neumœgen collection. They are specifically identical.

Genus AMPHIPYRA Ochs.

1816. Ochs., Schmett. Eur., IV, 70.

I follow Staudinger and the continental entomologists generally in using *Amphipyra* instead of *Pyrophila* Hbn., Verzeichniss, 208. Though bearing date the same year, 1816, Hübner's book was not published until 1818 at least, and as both are catalogue names the earliest must stand. The Tentamen, of course, is not considered in this argument.

A. tragopoginis Linn.*

1761. Linn., Fn. Suec., 1189, *Noctua.*
1767. Linn., Syst. Nat., ed. XII, 855, *Noctua.*
1781. Fabr., Spec. Ins., II, 273, *Noctua.*
1787. Fabr., Mant. Ins., II, 177, *Noctua.*
1793. Fabr., Ent. Syst., III, 2, 112, *Noctua.*
1793. Gmel., ed. XIII, Linn. Syst. Nat., V, 2573, *Noctua.*
1800. Hbn., Eur. Schmett., IV, 1, 8, f. 40, *Noctua.*
1816. Hbn., Verzeichniss, 209, *Scotophila.*
1825. Tr., Schmett. Eur., V, 277, *Amphipyra.*
1852. Gn., Spec. Gen., Noct., II, 415, *Amphipyra.*
1858. Wlk., C. B. Mus., Het., XIII, 1017, *Amphipyra.*
1870. Beth., Can. Ent., II, 73, *Amphipyra.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 22, *Pyrophila.*
1875. Speyer, Stett. Ent. Zeit., XXXVI, 168, *Amphipyra.*
repressus Grt.
1871. Grt., Can. Ent., III, 192, *Agrotis.*
1871. Saund., Can. Ent., III, 193, larva.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 22, pr. syn.

HABITAT.—Canada to Pennsylvania, west to the Mississippi; July and August.

A. glabella Morr.*

1874. Morr., Proc. Bost. Soc. N. H., XVII, 153, *Pyrophila.*
1878. Grt., Bull. Geol. Surv., IV, 180, *Pyrophila.*

HABITAT.—Pennsylvania; Illinois; Arizona; Nebraska; California; Colorado.

I do not know where the type is to be found at present.

A. triquetra Grt.

1883. Grt., Papilio, III, 78, *Pyrophila.*

HABITAT.—Arizona.

The type is with Mr. Neumœgen.

A. pyramidoides Gn.*

1852. Gn., Spec. Gen., Noct., II, 413, *Amphipyra.*
1857. Wlk., C. B. Mus., Het., XIII, 1018, *Amphipyra.*
1861. Grt., Proc. Ent. Soc. Phil., III, 86, *Amphipyra.*
1871. Riley, 3d Rept. Ins. Mo., 72, f. 31, 32, larva.
1871. Riley, Am. Ent., II, 26, f. 23, *Amphipyra.*
1874. Saund., Can. Ent., VI, 27, larva.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 22, *Pyrophila.*
1875. Speyer, Stett. Ent. Zeit., XXXVI, 168, *Amphipyra.*
1875. Saund., Can. Ent., VII, 14, *Amphipyra.*
1875. Thaxter, Psyche, I, 106, *Pyrophila.*
1875. Riley, Psyche, I, 152, *Amphipyra.*
var. **inornata** Grt.
1864. Grt., Proc. Ent. Soc. Phil., III, 86, *Amphipyra.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 22, pr. var.
ab. **conspersa** Riley.
1871. Riley, 3d Rept. Ins. Mo., 75, *Amphipyra.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 22, ab. pr.
1881. Riley, Ind. and Supplt. to Mo. Repts., 57, pr. var.

HABITAT.—United States east of the Rocky Mountains; Colorado; British Columbia, July to October.

Typical specimens are in the British Museum. I have not seen the type of Mr. Grote's variety; that described by Prof. Riley is in the National Museum.

Genus **ANORTHODES** Smith.

1891. Smith, Trans. Am. Ent. Soc., XVIII, 114.

A. prima Smith.*

1891. Smith, Trans. Am. Ent. Soc., XVIII, 115, *Anorthodes.*

HABITAT.—Florida, May; District of Columbia, May and September; Ohio.

The type is in the National Museum. I have an uneasy suspicion that this may prove to be *Caradrina tarda* Gn. The description applies fairly well, as I have recently found, but the species is certainly no *Caradrina.*

Genus **ORTHODES** Gn.

1852. Gn., Spec. Gen., Noct., I, 371.

A monographic revision of the species is in the Proc. U. S. Nat. Mus., XII, 469. The synonymy given by me there has been modified by an examination of the types in the British Museum.

O. crenulata Butler.*

1890. Butler, Ann. & Mag. Nat. Hist., 6 ser., VI, 97, *Dyschorista.*
infirma var., Gn.
1852. Gn., Sp. Gen., Noct., I, 375, *Orthodes.*
1856. Wlk., C. B. Mus., Het., X, 446, *Orthodes.*
1874. Morr., Can. Ent., VI, 252, *Orthodes.*
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 9, *Orthodes.*

HABITAT.—Canada in June; New England and Middle States in July and August; Missouri; Texas in March, April, and May; Colorado.

Mr. Butler was perfectly right in separating our North American species. Guenée described his type from Brazil, and as var. *A*, mentions a specimen from New York. This is like what is in all American collections, as *infirma;* but is specifically distinct from the Brazilian specimens. Mr. Butler's type is in the British Museum.

If Lederer's description of his genus *Dyschorista* is entitled to any weight at all, it is impossible that *crenulata* can be referred to it. Mr. Butler has allowed himself to be misled by a certain habital resemblance.

O. cynica Gn.*

1852. Gn., Spec. Gen., Noct., I, 375, *Orthodes.*
1856. Wlk., C. B. Mus., Het., X, 413, *Orthodes.*
1874. Morr., Can. Ent., VI, 252, *Orthodes.*
candens Gn.
1852. Gn., Spec. Gen., Noct., I, 376, *Orthodes.*

1856. Wlk., C. B. Mus., Het., x, 444, ? an sp. dist. præc.
1874. Morr., Can. Ent., VI, 252, pr. syn.
tecta Wlk.
1865. Wlk., C. B. Mus., Het., XXXIII, 711, *Orthosia.*

HABITAT.—Northern and Central United States. May to July; Canada in June and July; Nova Scotia; Colorado.

The types are all in the British Museum, and refer to the same species. Curiously enough Walker, while referring both *nimia* and *candens* Gn., as probable synonyms of *cynica*, redescribed a very obvious specimen of *cynica* as *Orthosia tecta.*

O. vecors Gn.*

1852. Gn., Spec. Gen., Noct., I, 376, *Orthodes.*
enerris Gn.
1852. Gn., Spec. Gen., Noct., III, 420, *Orthodes.*
1856. Wlk., C. B. Mus., Het., x, 444, ? = *cynica.*
1874. Morr., Can. Ent., VI, 253, *Pseudorthodes.*
1889. Smith, Proc. U. S. Nat. Mus., XII, 471, *Orthodes.*
nimia Gn.
1852. Gn., Spec. Gen., Noct., I, 376, *Orthodes.*
1856. Wlk., C. B. Mus., Het., x, 443, an var. *cynica?.*
1874. Morr., Can. Ent., VI, 252, = *cynica.*
1889. Smith, Proc. U. S. Nat. Mus., XII, 471, = *cynica.*
togata Wlk.
1865. Wlk., C. B. Mus., Het., XXXII, 672, *Apamea.*
relata Wlk.
1860. Wlk., Can. Nat. and Geol., V, 256, ? *Celæna.*
prodeuns Wlk.
1856. Wlk., C. B. Mus., Het., x, 453, ? *Cerastis*
griseocincta Harv.
1873. Harv., Bull. Buff. Soc. Nat. Sci., II, 120, *Orthodes.*
1874. Morr., Can. Ent., VI, 253, pr. var.
1889. Smith, Proc. U. S. Nat. Mus., XII, 472, *Orthodes.*
nitens Grt.
1883. Grt., Papilio, III, 31, *Orthodes.*
1889. Smith, Proc. U. S. Nat. Mus., XII, 472, pr. syn.

HABITAT.—District of Columbia in August; northward to Nova Scotia, west to the Mississippi Valley; Wisconsin; Canada and Massachusetts in July.

The type of *nitens* is in Mr. Neumœgen's collection, that of *griseocincta* I have not seen; all the others save *relata* are in the British Museum. *Velata* is in the Coll. Ent. Soc. of Ontario. The species is a variable one, but recognizable by the characters pointed out by me. *Griseocincta* is in the National Museum from the Meske collection, and is an aberration rather than a variety. The form *nitens* is simply a somewhat smaller and smoother type of the same thing. Guenée changed his name *vecors* to *enervis* in the index, because he had already employed *vecors* for a *Perigea.* His substituted name has been used heretofore, but I do not think the species are closely enough related to make the change necessary. Both of Walker's species in the British Museum are typical specimens of *recors*. *Velata*, the type of which was kindly sent me by Mr. Moffat, is a badly rubbed specimen, more like *nitens* in appearance.

O. virgula Grt.

1883. Grt., Papilio, III, 76, *Tæniocampa*.
1889. Smith, Proc. U. S. Nat. Mus., XII, 473, *Orthodes*.

HABITAT.—Arizona; Colorado.

The type is in Mr. Neumœgen's collection.

O. irrorata Smith.*

1887. Smith, Proc. U. S. Nat. Mus., X, 478, *Orthodes*.

HABITAT.—Washington; British Columbia.

Types are in the Graef, Neumœgen, and Edwards collections.

O. puerilis Grt.*

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 64, *Mamestra*.
1879. Grt., Can. Ent., XI, 26, *Graphiphora*.
1881. Grt., Can. Ent., XIII, 126, *Tæniocampa*.
1889. Smith, Proc. U. S. Nat. Mus., XII, 474, *Orthodes*.

HABITAT.—California.

The type is in the British Museum. A specimen marked "type," by Mr. Morrison, is in the National Museum.

O. agrotiformis Grt.

1881. Grt., Can. Ent., XIII, 14, *Graphiphora*.
1889. Smith, Proc. U. S. Nat. Mus., XII, 489, *Tæniocampa*.

HABITAT.—Colorado.

The types, two females, are in the British Museum, and are best referred to *Orthodes* until the male is known. The species seems a good one.

Genus **HIMELLA** Grt.

1874. Grt., Proc. Ac. Nat. Sci. Phil., 1874, 200.
1889. Smith, Proc. U. S. Nat. Mus., XII, 467.

H. contrahens Wlk.*

1860. Wlk., Can. Nat. and Geol., V, 255, ? *Celæna*.
thecata Morr.
1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 59, *Mamestra*.
1880. Grt., Can. Ent., XII, 186, *Graphiphora*.
1881. Grt., Can. Ent., XIII, 126, *Tæniocampa*.
1889. Smith, Proc. U. S. Nat. Mus., XII, 468, *Himella*.
contrahens Grt.
1878. Grt., Bull. U. S. Geol. Surv., IV, 180, *Graphiphora*.
1881. Grt., Can. Ent., XII, 186, syn. *thecata*.

HABITAT.—Nova Scotia; Canada in July; Maine; New Hampshire in July; northern New York; Nebraska; Colorado; New Mexico.

In describing *Graphiphora contrahens* n. sp., Mr. Grote refers to the fact that he had seen a specimen labeled *contrahens* by Walker; but he seems not to have known that it had been described, and this would also account for his referring the name as a synonym of Morrison's species. To the courtesy of Mr. Moffat I owe an opportunity of examining Walker's type from the collection of the Entomological Society of Ontario, and I find it the same as Mr. Grote's species, the type of which is in the British Museum, and also like Mr. Morrison's species, the type of which is in the Tepper collection.

H. intractata Morr.*

1874. Morr., Proc. Bost. Soc., N. H., XVII, 160, *Tæniocampa.*
1889. Smith, Proc. U. S. Nat. Mus., XII, 468, *Himella.*
fidelis Grt.
1874. Grt., Proc. Ac. Nat. Sci. Phil., 1874, 201, *Himella.*
1879. Grt., Can. Ent., XI, 27, *Graphiphora.*
1889. Smith, Proc. U. S. Nat. Mus., XII, 468, pr. syn.

HABITAT.—New York; Massachusetts; Missouri; Illinois.

Mr. Morrison's type is in the Tepper collection. Mr. Grote's is in the British Museum. The two are alike.

Genus **CROCIGRAPHA** Grt.
1875. Grt., Can. Ent., VII, 57.
1889. Smith, Proc. U. S. Nat. Mus., XII, 469.

C. normani Grt.*

1874. Grt., Can. Ent., VI, 115, *Perigrapha.*
1874. Morr., Can. Ent., VI, 251, *Tæniocampa.*
1875. Grt., Can. Ent., VII, 57, *Crocigrapha.*
1875. Grt., Can. Ent., VII, 227, pl. i, f. 13, *Crocigrapha.*

HABITAT.—Canada, in May and June; Northern and Eastern States; New York, in May and June.

I have not seen the type of this species. The British Museum specimen from the Grote collection is like the specimens in the National Museum.

Genus **TÆNIOCAMPA** Gn.
1839. Gn., Essai, Ann. Soc. Ent. Fr., VIII, 477.

A monographic revision of the species of this genus can be found in the Proc. U. S. Nat Mus., XII, 474.

T. furfurata Grt.*

1874. Grt., Proc. Ac. Nat. Sci. Phil., XXVI, 201, *Himella.*
1879. Grt., Can. Ent., XI, 27, *Graphiphora.*
1882. Grt., New List, 31, *Tæniocampa.*

HABITAT.—New York; Illinois; Arizona; Colorado; California, in October; British Columbia.

The type is in the British Museum.

T. peredia Grt.*

1883. Grt., Papilio, III, 32, *Tæniocampa.*

HABITAT.—Maine, in August; northern New York; Vermont.

The types are in the collection of Dr. Thaxter and Mr. Neumœgen.

T. perbrunnea Grt.*

1879. Grt., Can. Ent., XI, 28, *Graphiphora*.
1882. Grt., New List, 31, *Tæniocampa*.

HABITAT.—California.

The type is in the British Museum.

T. uniformis Smith.*

1887. Smith, Proc. U. S. Nat. Mus., X, 472, *Tæniocampa*.

HABITAT.—Arizona.

Types are in the National Museum and in the Graef collection.

T. palilis Harv.*

1875. Harv., Bull. Buff. Soc. Nat. Sci., II, 273, *Dianthœcia*.
1889. Smith, Proc. U. S. Nat. Mus., XII, 456, *Tæniocampa*.

HABITAT.—Texas in November.

The type is in the British Museum.

T. trifascia Smith.*

1891. Smith, Trans. Am. Ent. Soc., XVIII, 118, *Tæniocampa*.

HABITAT.—Colorado.

The type is in the National Museum.

T. carminata Smith.*

1890. Smith, Ent. Amer., VI, 121, *Tæniocampa*.

HABITAT.—Colorado.

The type is in the National Museum.

T. columbia Smith.*

1887. Smith, Proc. U. S. Nat. Mus., X, 472, *Tæniocampa*.

HABITAT.—Northwest British Columbia.

The types are in the National Museum and Neumœgen collection.

T. culea Gn.*

1852. Gn., Spec. Gen., Noct., I, 404, *Mesogona*.
1856. Wlk., C. B. Mus., Het., X, 474, *Mesogona*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 24, *Mythimna*.
modifica Morr.
1874. Morr., Proc. Bost. Soc. N. H., XVII, 150, *Tæniocampa*.
consopita Grt.
1881. Grt., Papilio, I, 151, *Tæniocampa*.
1889. Smith, Proc. U. S. Nat. Mus., XII, 480, =*modifica*.

HABITAT.—Massachusetts; New York; New Jersey; District of Columbia, in May; Florida; Illinois; Arizona.

Guenée's type is in the British Museum; Mr. Morrison's is in the Tepper collection, and Mr. Grote's is with Mr. Neumœgen. I have seen them all, and they refer to the same species. Mr. Grote's species is an inconstant color variety, while *modifica* is exactly like *culea*.

T. rufula Grt.*

1874. Grt., Bull. Buff. Soc. Nat. Hist., II, 64, *Dianthœcia*.
1879. Grt., Can. Ent., XI, 26, *Tæniocampa*.
1881. Grt., Can. Ent., XIII, 126, *Tæniocampa*.

Habitat.—California, July to October; Colorado.

The type is in the British Museum.

T. perforata Grt.

1883. Grt., Papilio, III, 73, *Tæniocampa*.

Habitat.—Arizona.

The types are in Mr. Neumœgen's collection.

T. oviduca Gn.*

1852. Gn., Spec. Gen., Noct., I, 357, *Tæniocampa*.
1856. Wlk., C. B. Mus., Het., X, 429, *Tæniocampa*.
capsella Grt.
1874. Grt., Proc. Ac. Nat. Sci. Phil., XXVI, 201, *Tæniocampa*.
1889. Smith, Proc. U. S. Nat. Mus., XII, 481, pr. syn.
orobia Harv.
1876. Harv., Can. Ent., VIII, 154, *Mamestra*.
1881. Grt., Can. Ent., XIII, 126, *Tæniocampa*.
1889. Smith, Proc. U. S. Nat. Mus., XII, 489, *Tæniocampa*.
1891. Smith, Trans. Am. Ent. Soc., XVIII, 116, pr. syn.

Habitat.—Canada; Atlantic States to Florida, west to the Rocky Mountains; Northern and Eastern States, May to July.

I have compared the types of these species in the British Museum and have no doubt of their identity. In the National Museum is a duplicate of Harvey's type, from the Meske collection.

T. utahensis Smith.*

1887. Smith, Proc. U. S. Nat. Mus., X, 473, *Tæniocampa*.

Habitat.—Utah.

The type is in the National Museum.

T. curtica Smith.*

1890. Smith, Ent. Amer., VI, 122, *Tæniocampa*.

Habitat.—Sierra Nevada, California.

Types are in the National Museum and in the Edwards collection.

T. incincta Morr.*

1874. Morr., Proc. Bost. Soc. N. H., XVII, 133, 156, *Mamestra*.
1874. Grt., Buff. Soc. Nat. Sci., II, 215, *Mamestra*.
1881. Grt., Can. Ent., XIII, 126, *Tæniocampa*.

Habitat.—Massachusetts; Illinois; Colorado.

The type is in the National Museum.

T. suffusa Smith.

1887. Smith, Proc. U. S. Nat. Mus., X, 471, *Tæniocampa*.

Habitat.—Colorado; Arizona.

The type is in the Graef collection.

T. obtusa Smith.

1887. Smith, Proc. U. S. Nat. Mus., x, 474, *Tæniocampa.*

HABITAT.—Arizona.

The type is in Mr. Graef's collection.

T. pectinata Smith.*

1887. Smith, Proc. U. S. Nat. Mus., x, 475, *Tæniocampa.*
1891. Smith. Trans. Am. Ent. Soc., XVIII, 118, *Tæniocampa.*

HABITAT.—California.

The original type, a somewhat broken specimen, is in the Edwards collection. A fine series of good typical specimens is in the National Museum.

T. annulimacula Smith.*

1891. Smith, Trans. Am. Ent. Soc., XVIII, 117, *Tæniocampa.*

HABITAT.—Texas in February.

The types are in the National Museum.

T. addenda Smith.

1890. Smith, Ent. Amer., VI, 122, *Tæniocampa.*

HABITAT.—California.

The type is with Mr. Neumœgen.

T. terminata Smith.

1887. Smith, Proc. U. S. Nat. Mus., x, 475, *Tæniocampa.*

HABITAT.—Southern California.

The type is in the Tepper collection.

T. subfuscula Grt.

1873. Grt., Proc. Bost. Soc. N. H., XVI, 244, *Anarta.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, pl. I, f. 7, *Anarta.*
1887. Smith, Proc. U. S. Nat. Mus., x, 474, *Tæniocampa.*

HABITAT.—Oregon; Montana.

The type is in the British Museum.

T. arthrolita Harv.

1874. Harv., Bull. Buff. Soc. Nat. Sci., II, 275, *Graphiphora.*
1889. Smith, Proc. U. S. Nat. Mus., XII, 186, *Tæniocampa.*

HABITAT.—California in November.

The type is in the British Museum. It is a large broad-winged form with pointed apices of primaries, and has hardly the habitus of a *Tæniocampa*, somewhat resembling Mr. Morrison's *vegeta.* The eyes are hairy, the antennæ strongly ciliate.

T. vindemialis Gn.

1852. Gn., Spec. Gen., Noct., I, 344, *Ceramica*.
1857. Wlk., C. B. Mus., Het., X, 417, *Ceramica*.
1875. Grt., Proc. Ac. Nat. Sci. Phil., XXVII, 418, *Mamestra*.

HABITAT.—East Florida.

The type is in the British Museum and is not at all the species so named in the American collections by Mr. Grote. It has hairy eyes and has a resemblance to *Homoglæa carnosa* in color and in a certain false appearance of transparency in the wings. I had not previously seen the species and rather suspect a West Indian origin for the specimen. It is a female and its reference here may not be final.

T. pacifica Harv.*

1874. Harv., Bull. Buff. Soc. Nat. Sci., II, 120, *Graphiphora*.
1875. Grt., Can. Ent., VII, 45, =*incerta*.
1887. Smith, Proc. U. S. Nat. Mus., X, 476, an sp. dist.

HABITAT.—Colorado; California, January, February, and March.

The type is in the British Museum and is distinct from *alia* as described by me.

T. alia Gn.*

1852. Gn., Spec. Gen., Noct., I, 352, *Tæniocampa*.
1856. Wlk., C. B. Mus., Het., X, 429, *Tæniocampa*.
1875. Speyer, Stett. Ent. Zeit., XXXVI, 118, *Tæniocampa*.
1887. Smith, Proc. U. S. Nat. Mus., X, 476, *Tæniocampa*.
1891. Dyar, Can. Ent., XXIII, 156, larva.
    incerta ‡ Grt., in lists.
1875. Speyer, Stett. Ent. Zeit., XXXVI, 116, *Tæniocampa*.
1885. Dimmock, Psyche, IV, 273, *Tæniocampa*.
1887. Smith, Proc. U. S. Nat. Mus., X, 476, pr. syn.
    instabilis Fitch.
1856. Fitch, 3d Report, Trans. N. Y. State Agl. Soc., XVI, 313, *Orthodes*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 23, =*incerta*.
1889. Smith, Proc. U. S. Nat. Mus., XII, 487, =*alia*.
    insciens Wlk.
1857. Wlk., C. B. Mus., Het., XI, 746, *Orthosia*.
    var. **hibisci** Gn.
1852. Gn., Spec. Gen., Noct., I, 355, *Tæniocampa*.
    confluens Morr.
1874. Morr., Proc. Bost. Soc. N. H., XVII, 159, *Tæniocampa*.
1880. Grt., Can. Ent., XII, 187, =*incerta*.
1889. Smith, Proc. U. S. Nat. Mus., XII, 487, =*alia*.
1891. Smith, List Lepidoptera, 48, =*hibisci*.

HABITAT.—Canada to Georgia, west to the Mississippi States, April to June.

The types of *alia* and *insciens* are in the British Museum and are identical. Fitch's type I saw before the collection was dispersed; but I do not know who has it at present. *Hibisci* is based on a drawing which I have not seen, but the description of which accords perfectly with *confluens*, the type of which is in the Tepper collection.

T. rubrescens Wlk.*

1865. Wlk., C. B. Mus., Het., XXXII, 671, *Apamea.*
1891. Smith, Can. Ent., XXIII, 121, *Tæniocampa.*
renata Smith.
1890. Smith, Ent. Amer., VI, 123, *Tæniocampa.*
1891. Smith, Can. Ent., XXIII, 121, pr. syn.

HABITAT.—Canada; New Hampshire; northern New York.

The types of both species are now in the National Museum. *Rubrescens* was described from Dr. Bethune's collection, and to his courtesy the Museum owes the type.

T. subterminata Smith.*

1887. Smith, Proc. U. S. Nat. Mus., X, 476, *Tæniocampa.*

HABITAT.—Maine: New Hampshire; New York, April and May.

Types are in the National Museum and in the Tepper and Fernald collections.

T. garmani Grt.

1879. Grt., Can. Ent., XI, 28, *Tæniocampa.*

HABITAT.—Illinois; Iowa.

The type is in the British Museum.

T. præses Grt.

1879. Grt., Bull. Geol. Surv., V, 202, *Perigrapha.*
1889. Smith, Proc. U. S. Nat. Mus., XII, 488, *Tæniocampa.*

HABITAT.—California.

The type is in the British Museum.

T. styracis Gn.

1852. Gn., Spec. Gen., Noct., I, 357, *Tæniocampa.*
1856. Wlk., C. B. Mus., Het., X, 430, *Tæniocampa.*

HABITAT.—Georgia.

The species is based on one of Abbot's figures, which I have not seen, and I have not, thus far, been able to apply the description.

T. revicta Morr.

1875. Morr., Proc. Bost. Soc. N. H., XVIII, 241, *Tæniocampa.*

HABITAT.—Illinois.

I have not been able to identify this species and do not know where the type can be found at present.

T. planalis Grt.

1883. Grt., Ann. & Mag. Nat. Hist., 1883, 53, *Agrotis.*
1883. Grt., Trans. Kans. Ac. Sci., VIII, 54, *Agrotis*—reprint.
1880. Smith, Bull. U. S. Nat. Mus., 38, 213, *Tæniocampid.*

HABITAT.—New Mexico.

The type is with Prof. Snow. I have seen it and find it a somewhat aberrant form resembling some agrotids and described as such; but with hairy eyes and unarmed legs. The present generic reference can not be considered final until confirmed by an examination of new material.

T. vegeta Morr.

1875. Morr., Proc. Ac. Nat. Sci., XXVII, 432, *Tæniocampa.*

HABITAT.—Texas.

The type is in the Tepper collection. A correctly named specimen is also in the British Museum, from the Grote collection. The species is not a *Tæniocampa* and probably belongs to the fasciatæ; but in default of sufficient study to place it certainly, I leave it here for the present. Mr. Slingerland has called my attention to the fact that the *Cissusa spadix* of Cramer, heretofore referred as a synonym of *Drasteria erechtea*, is a distinct species. On examination I find this to be the fact, and it is more than likely that it will prove the same as the above species. Material for study is lacking, therefore the reference can not be positively made.

Genus **STRETCHIA** Hy. Edw.

1874. Hy. Edw., Proc. Cal. Ac. Sci., V, 267.

The species of this genus are treated and monographically described under *Perigrapha* in the Proc. U. S. Nat. Mus., XII, 490. The European species of *Perigrapha* have a very strong resemblance habitally to the species of *Stretchia*, which has induced the reference of our species to the European genus despite recognized differences in structure. The occurrence of a structurally typical *Perigrapha* in our own fauna renders a return to another generic term necessary, and *Stretchia* somewhat antedates *Acerra* (Grt., Bull. Buff. Soc. Nat. Sci., II, 162). This law of priority plays odd tricks occasionally and here necessitates the use of a term originally referred to the Bombycidæ and irrecognizably described as against another correctly placed and well described.

S. normalis Grt.

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 162, *Acerra.*
1875. Grt., Check List Noctuidæ, pl. f. 4, *Acerra.*
1879. Grt., Can. Ent., XI, 27, *Graphiphora.*
1881. Grt., Can. Ent., XIII, 133, *Perigrapha.*

HABITAT.—California.

The type is in the British Museum.

S. inferior Smith.

1887. Smith, Proc. U. S. Nat. Mus., X, 477, *Perigrapha.*

HABITAT—California.

The types are in the National Museum and in the Edwards collection.

S. plusüformis Hy. Edw.*

1874. Hy. Edw., Proc. Cal. Ac. Sci., v, 267, *Stretchia.*
1882. Grt., New List, 31, *Perigrapha.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 171, *Perigrapha.*

HABITAT.—Nevada; Colorado.

The type is in the Edwards collection.

S. muricina Grt.*

1875. Grt., Bull. Buff. Soc. Nat. Sci., III, 85, *Acerra.*
1879. Grt., Can. Ent., XI, 27, *Graphiphora.*
1881. Grt., Can. Ent., XIII, 133, *Perigrapha.*

HABITAT.—Oregon.

The type is in the Edwards collection.

S. behrensiana Grt.

1875. Grt., Can. Ent., VII, 71, *Graphiphora.*
1881. Grt., Can. Ent., XIII, 133, *Perigrapha.*
1889. Smith, Proc. U. S. Nat. Mus., XII, 493, *Perigrapha.*
1891. Smith, Trans. Am. Ent. Soc., XVIII, 120, *Stretchia.*

HABITAT.—California.

The type is in the British Museum. The specimens I have identified as this species are correct, but represent a distinct varietal form, too inconstant to deserve a name.

S. variabilis Smith.*

1891. Smith, Trans. Am. Ent. Soc., XVIII, 119, *Stretchia.*

HABITAT.—Colorado, July.

The types are in the National Museum and in the Neumœgen collections.

S. pulchella Harv.

1876. Harv., Can. Ent., VIII, 54, *Graphiphora.*
1889. Smith, Proc. U. S. Nat. Mus., XII, 494, *Perigrapha.*

HABITAT.—California.

The type is in the Edward's collection.

S. erythrolita Grt.*

1879. Grt., Can. Ent., XI, 208, *Graphiphora.*
1881. Grt., Can. Ent., XIII, 133, *Perigrapha.*

HABITAT.—California.

A type is in the National Museum; another in the British Museum.

S. transparens Grt.*

1881. Grt., Bull. Geol. Surv., VI, 583, *Perigrapha.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 171, *Perigrapha.*

HABITAT.—Washington.

The type is in the National Museum from my collection.

Genus **PERIGRAPHA** Lederer.

1857. Lederer, Noct. Eur., 136.

P. prima Smith.

1891. Smith, Trans. Am. Ent. Soc., XVIII, 119, *Perigrapha.*

HABITAT.—Sierra Nevada, California.

The type is in the Edwards collection.

Genus **PERIGONICA** Smith.

1890. Smith, Ent. Amer., VI, 123.

P. angulata Smith.*

1890. Smith, Ent. Amer., VI, 124, *Perigonica.*
1891. Smith, Trans. Am. Ent. Soc., XVIII, 118, *Perigonica.*

HABITAT.—Sierra Nevada, California, in June and December.

Types are in the Edwards collection and in the National Museum.

P. fulminans Smith.*

1890. Smith, Ent. Amer., VI, 124, *Perigonica.*
1891. Smith, Trans. Am. Ent. Soc., XVIII, 118, *Perigonica.*

HABITAT.—Colorado.

Types are in the National Museum and in the Rutgers College collection.

Genus **TRICHOCLEA** Grt.

1883. Grt., Papilio, III, 30.
1889. Smith, Proc. U. S. Nat. Mus., XII, 459.

T. edwardsii Smith.*

1887. Smith, Proc. U. S. Nat. Mus., X, 478, *Trichoclea.*
1889. Smith, Proc. U. S. Nat. Mus., XII, 460, *Trichoclea.*

HABITAT.—California.

The type is in the Edwards collection; exact duplicates are in the National Museum.

T. decepta Grt.*

1883. Grt., Papilio, III, 30, *Trichoclea.*
1889. Smith, Proc. U. S. Nat. Mus., XII, 460, *Trichoclea.*

HABITAT.—Arizona.

The types are in the National Museum and in Mr. Neumœgen's collection.

T. antica Smith.*

1891. Smith, Trans. Am. Ent. Soc., XVIII, 116, *Trichoclea.*

HABITAT.—Los Angeles County, California, April 10.

The types are in the National Museum.

T. postica Smith.*

1891 Smith, Trans. Am. Ent. Soc., XVIII, 115, *Trichoclea.*

HABITAT.—Colorado.

The types are in the National Museum and with Mr. Neumœgen.

Genus **TRICHOCOSMIA** Grt.

1883. Grt., Can. Ent., XV, 6.

T. inornata Grt.*

1883. Grt., Can. Ent., XV, 6, *Trichocosmia.*

HABITAT.—Arizona.

Types are in the Neumœgen collection and in the National Museum.

Genus **TRICHORTHOSIA** Grt.

1883. Grt., Papilio, III, 31.

T. parallela Grt.

1883. Grt., Papilio, III, 31, *Trichorthosia.*
1883. Grt., Trans. Kans. Ac. Sci., VIII, 50, *Trichorthosia.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 160, *Trichorthosia.*

HABITAT.—New Mexico.

Types are in the Neumœgen collection.

Genus **METALEPSIS** Grt.

1875. Grt., Check List Noct., 25.

M. cornuta Grt.

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 68, *Pachnobia.*
1875. Grt., Can. Ent., VII, 155, *Pachnobia.*
1875. Grt., Check List Noct., 25, *Metalepsis.*
1876. Grt., Stett. Ent. Zeit., XXXVII, 136, *Metalepsis.*
1883. Grt., Can. Ent., XV, 129, *Metalepsis.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 160, *Metalepsis.*

HABITAT.—California.

The type specimen in the British Museum represents a form I had not seen. It looks like a small brown *Pachnobia* with fused ordinary spots. The antennæ are pectinated, front apparently smooth, eyes with hairy lashes, tibiæ unarmed.

More recently I have had this species for determination from two sources and from Western localities other than California.

Genus **PSEUDOGLÆA** Grt.

1876. Grt., Can. Ent., VIII, 18.

P. blanda Grt.*

1875. Grt., Bull. Buff. Soc. Nat. Sci., III, 86, *Choephora.*
1876. Grt., Can. Ent., VIII, 18, *Pseudoglæa.*
tædata Grt.
1876. Grt., Can. Ent., VIII, 18, *Pseudoglæa.*
decepta Grt.
1881. Grt., Bull. Geol. Surv., VI, 271, *Pseudoglæa.*

HABITAT.—Colorado; Texas in October and November; California in September; Washington; Vancouver.

The types of all the above are in the British Museum, and are one species only. It is not rare, and varies more than the differences between the three species.

Genus **PSEUDORTHOSIA** Grt.

1871. Grt., Bull. Buff. Soc. Nat. Sci., II, 161.

P. variabilis Grt.*

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 161, *Pseudorthosia.*
1874. Grt., Proc. Ac. Nat. Sci. Phil., 1874, 207, *Pseudorthosia.*
1875. Grt., Can. Ent., VII, 15, *Pseudorthosia.*
1875. Grt., Bull. Buff. Soc. Nat. Sci., III, 86, *Choephora.*
1876. Grt., Can. Ent., VIII, 18, *Pseudorthosia.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 160, *Pseudorthosia.*

HABITAT.—California, September and October; Colorado.

I have not seen the type, nor do I know where it is. The species is quite common in some parts of California and is well known. *P. pectinata*, the type of which is in the British Museum, is a *Pachnobia*, which I had redescribed as *ferruginoides*. A specimen labeled "type" by Mr. Morrison is in the National Museum.

Genus **CHOEPHORA** G. & R.

1868. G. & R., Trans. Am. Ent. Soc., II, 199.

C. fungorum G. & R.*

1868. G. & R., Trans. Am. Ent. Soc., II, 200, pl. III, 74, *Choephora.*
1875. Grt., Bull. Buff. Soc. Nat. Sci., III, 86, *Pseudorthosia.*
1876. Grt., Can. Ent., VIII, 17, *Choephora.*
1876. Grt., Stett. Ent. Zeit., XXXVII, 136, *Pseudorthosia.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 160, *Choephora.*

HABITAT.—Eastern, Middle, and Central States.

The type is in the collection of the American Entomological Society.

Genus **MESOGONA** Bdv.

1840. Bdv., Gen. et Ind. Meth., 144.

M. oxalina Hbn.

1823. Hbn., Samml. Eur. Schmett., IV, 219, *Noctua.*
1852. Gn., Spec. Gen., Noct., I, 405, *Mesogona.*
intexta Harv.
1875. Harv., Can. Ent., VII, 136, *Ipimorpha.*
1882. Grt., New List, 32, ? pr. syn.

HABITAT.—Sharon Springs, New York.

The type is in the British Museum. Mr. Grote suggests that it is a European example, and he may be correct; at all events it is exactly like ordinary specimens of *oxalina*. But, on the other hand, Mr. von Meske, who sent Dr. Harvey the specimen, was a very careful collector, and labeled the insect Sharon Springs, a favorite collecting ground.

The *Mesogona culea* of M. Guenée is a *Tæniocampa*, and will be found under that genus.

Genus **ZOTHECA** Grt.

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 68.

Z. tranquila Grt.*

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 69, *Zotheca.*
1891. Dyar, Can. Ent., XXIII, 205, life history.
sambuci Behr.
1874. Behr, in Strk. Lep. Rhop. et Het., 94, *Cosmia.*
1885. Behr, Bull. Cal. Ac. Sci., III, 61, *Euperia.*
var. **viridula** Grt.
1878. Grt., Bull. Geol. Surv., IV, 180, pr. var.

HABITAT.—California.

Mr. Grote's types are in the British Museum, where there are also two specimens, one of each form, marked "*Cosmia sambuci* Behr, don. O. S. 8, '78." The O. S., refers to Baron von Osten Sacken, who probably obtained either specimens or name from Dr. Behr himself. Mr. Strecker has also named this *sambuci* for collectors.

Genus **CALYMNIA** Hbn.

1816. Hbn., Verzeichniss, 235.

C. orina Gn.*

1852. Gn., Spec. Gen., Noct., II, 10, *Cosmia.*
1856. Wlk., C. B. Mus., Het., X, 489, *Cosmia.*
1873. Grt., Can. Ent., V, 205, *Cosmia.*
1873. Saund., Can. Ent., V, 206, *Cosmia.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 24, *Calymnia.*
var. **calami** Harv.
1876. Harv., Can. Ent., VIII, 54, *Calymnia.*

HABITAT.—Canada, in July, to Texas; Colorado; California; Massachusetts, July and August; Texas, May and June.

Specimens apparently determined by Guenée are in the British Museum, where also Dr. Harvey's type is. The latter is the paler form, and bears much the same relation to *orina* that *Zotheca viridifera* does to *tranquila.*

Genus **IPIMORPHA** Hbn.

1816. Hbn., Verzeichniss, 238.

I. pleonectusa Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 191, *Ipimorpha.*
æquilinea Smith.
1882. Smith, Bull. Bkln. Ent. Soc., V, 67, *Calymnia.*
1891. Smith, List Lepidoptera, 49, pr. syn.

HABITAT.—Colorado; Utah; New York in July and August; Massachusetts in August; New Jersey.

The type is in Dr. Lintner's collection.

I. subvexa Grt.

1876. Grt., Can. Ent., VIII, 189, *Ipimorpha.*
1882. Grt., New List, 32, ? pr. var.

HABITAT.—Texas; Colorado.

I have not seen the type and do not know where it is. Mr. Grote has suggested that it may be the southern form of the preceding, but later lists it as a good species. I am not in a position to decide the matter and leave it as Mr. Grote did.

Genus **TRILEUCA** Grt.

1883. Grt., Proc. Am. Phil. Soc., xxi, 166.

T. buxea Grt.

1882. Grt., Can. Ent., XIII, 230, *Schinia*.
1882. Grt., Papilio, II, 64, pl. I, f. 4, *Schinia*.
1883. Grt., Proc. Am. Phil. Soc., XXI, 166, *Trileuca*.

HABITAT.—Southwestern Texas.

The type is in Mr. Neumœgen's collection.

T. dentalis Smith.

1891. Smith, Trans. Am. Ent. Soc., XVIII, 123, *Trileuca*.

HABITAT.—Southern Texas.

The type is in Mr. Neumœgen's collection.

T. gulnare Strk.

1878. Strk., Proc. Dav. Ac. Sci., II, 274, pl. IX, f. 1, *Schinia*.
1883. Smith, Trans. Am. Ent. Soc., X, 252, *Schinia*.
1883. Grt., Proc. Am. Phil. Soc., XXI, 153, *Trileuca*.

HABITAT.—Pennsylvania; Illinois.

The type is with Mr. Strecker. I have seen one other specimen. It may not be congeneric with the others referred here, but it is nearer right than with *Schinia*. Strictly, *rectifascia* is the type of *Trileuca*, because *buxea* was placed in *Xanthodes* on p. 153, and is only incidentally referred to *Trileuca* on p. 166; but *rectifascia* is an *Atethmia*, and the genus, as based on that species, of course, a synonym. Mr. Grote did not see proof of this paper in the Proc. Am. Phil. Soc., which is full of typographical and other errors, else he would have seen the contradiction, and it is in accordance with "the usual comity and practice" that I retain the name with *buxea* as type.

Genus **ATETHMIA** Hbn.

1816. Hbn., Verzeichniss, 238.

A. subusta Hbn.*

1818. Hbn., Zutræge, II, 205, 206, *Atethmia*.
1816. Hbn., Verzeichniss, 238, *Atethmia*.
1852. Gn., Spec. Gen., Noct., II, 13, *Atethmia*.
1856. Wlk., C. B. Mus., Het., X, 490, *Atethmia*.

HABITAT.—Florida; Texas; Central and South America

Mr. Druce says, in the Biol. Cent. Am., Het. 290, that *Anthophila erecta* Wlk., *Poaphila congesta* Wlk., and *Laphygma trilineata* Wlk., are all the same as *subusta* Hbn., and he is probably right.

A. inusta Gn.*

1852. Gn., Spec. Gen., Noct., II, 12, *Atethmia.*
1856. Wlk., C. B. Mus., Het., x, 491, *Atethmia.*

HABITAT.—Texas; Florida.

Both the above species are South American and are scarcely distinct. I have received them for identification on several occasions and have seen them in collections both from Texas and Florida. I have no references to the South American literature, and in our own the species have not been heretofore referred to.

A. rectifascia Grt.*

1874. Grt., Proc. Bost. Soc. N. H., XVI, 242, *Schinia.*
1883. Smith, Trans. Am. Ent. Soc., x, 247, *Schinia.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 166, *Trileuca.*

HABITAT.—New Jersey; Pennsylvania; Alabama; Illinois.

Specimens from the Grote collection, apparently not types, are in the British Museum. The species is larger than, but fully congeneric with, the preceding.

A. canescens Behr.

1885. Behr, Bull. Cal. Ac. Sci., III, 61, *Atethmia.*

HABITAT.—California.

It is almost certain that under this name Dr. Behr redescribes *Calymnia orina* Gn., and its variety *calami* Harv. I have not seen Californian specimens, however, and therefore cite the species as described.

Genus **CEA** Grt.
1883. Grt., Papilio, III, 78.

C. immaculata Grt.

1883. Grt., Papilio, III, 78, *Cea.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 171, *Cea.*

HABITAT.—Arizona.

The type is in Mr. Neumœgen's collection.

Genus **COSMIA** Ochs.
1816. Ochs., Schmett. Eur., IV, 84.

C. paleacea Esp.*

1788. Esper, Schmetterlinge, pl. 122, f. 501, *Noctua.*
1857. Lederer, Schmett. Eur., 143, *Cosmia.*
discolor Wlk.
1859. Wlk., C. B. Mus., Het., XV, 1658, *Mythimna.*
1882. Grt., Ill. Essay, 41, =*infumata.*
infumata Grt.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 160, *Orthosia.*
1877. Grt., Can. Ent., IX, 22, *Cosmia.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 160, ? pr. syn.

HABITAT.—United States generally; Canada and Northern and Eastern States in August and September.

The types of *infumata* and *discolor* are in the British Museum and are the same species: nor can I find them different from the European forms under the same name.

C. perophoroides Strk.

1876. Strk., Proc. Ac. Nat. Sci. Phil., XXVIII, 152, *Cosmia*.

HABITAT.—Florida.

The type is in the Strecker collection. I do not know the species.

Genus CLEOCERIS Bdv.

1829. Bdv., Index Meth., 93.

C. onychina Gn.

1852. Gn., Spec. Gen., Noct., II, 48, *Epunda*.
1857. Wlk., C. B. Mus., Het., XI, 528, *Raphia*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 25, *Cleoceris*.

HABITAT.—North America.

The type is probably with M. Oberthür, and I have not seen it. The species has not been identified in American collections.

C. elda French.*

1887. French, Can. Ent., XIX, 5, *Homohadena*.
1891. Smith, Trans. Am. Ent. Soc., XVIII, 108, *Dryobota*.

HABITAT.—California, Sierra Nevada, September.

Prof. French has his type and has kindly sent me a compared specimen.

C. rectifascia Smith.*

1891. Smith, Trans. Am. Ent. Soc., XVIII, 109, *Dryobota*.

HABITAT.—Sierra Nevada, California.

Types are in the National Museum and in the Edwards collection.

C. curvifascia Smith.*

1891. Smith, Trans. Am. Ent. Soc., XVIII, 109, *Dryobota*.

HABITAT.—California, Sierra Nevada, and Placer County, in September.

Types are in the National Museum and in the Edwards collection.

The last three species are referred to *Cleoceris* after comparing material in the British Museum. I do not consider the genus at all well placed in the series; but until the necessary critical studies are made, changes are tentative at best, and no harm is done in leaving it here for the present.

Genus ANCHOCELIS Gn.

1839. Gn., Ann. Soc. Ent. Fr., 483.

A. digitalis Grt.*

1882. Grt., Bull. Geol. Surv., VI, 584, *Anchocelis*.

HABITAT.—Maine; New Hampshire; New York; Illinois.

The type is with Mr. Neumœgen.

Genus **PYRRHIA** Hbn.

1816. Hübner, Verzeichniss, 262.

P. umbra Hufn.*

1767. Hufnagel, Berliner Mag., III, 294, *Noctua*.
1852. Gn., Spec. Gen., Noct., II. 178, *Heliothis*.
1883. Smith, Trans. Am. Ent. Soc., X, 223, *Chariclea*.
exprimens ‡ Grt.
1868. G. & R., Trans. Am. Ent. Soc., III, 180, ? pr. syn.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 124, *Chariclea*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 35, pl. III, f. 5, *Pyrrhia*.
1874. Lint., Ent. Cont., III, 163, larva, *Chariclea*.
1875. Speyer, Stett. Ent. Zeit., XXXVI, 156, 350, *Pyrrhia*.
1878. Graef, Bull. Bkln. Ent. Soc., I, 10, pr. syn.
1881. Grt., Bull. Geol. Surv., VI, 561, *Pyrrhia*.
1883. Smith, Trans. Am. Ent. Soc., X, 223, pr. syn.
1891. Butler, Entomologist, XXIV, 292, pr. syn.
var. **exprimens** Wlk.*
1857. Wlk., C. B. Mus., Het., XI, 687, *Heliothis*.
1891. Butler, Entomologist, XXIV. 292, *Pyrrhia*.
angulata Grt.
1874. Grt., Trans. Am. Ent. Soc., V, 93, *Pyrrhia*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, pl. III, f. 6, *Pyrrhia*.
1876. Speyer, Stett. Ent. Zeit., XXXVII, 203, an sp. dist.
1881. Coquillett, Papilio, I, 8, larva.
1882. Grt., Bull. Geol. Surv., VI, 564, *Pyrrhia*.
1883. Smith, Trans. Am. Ent. Soc., X, 223, *Chariclea*, et pr. syn.
1883. Hy. Edw., Papilio, III, 135, larva.
1886. Grt., Can. Ent., XVIII, 231, an sp. dist.
1891. Butler, Entomologist, XXIV, 292,=*exprimens*.

HABITAT.—Canada in June and July; Eastern and Central United States, June to August; Colorado.

Walker's type is in the British Museum, and so is the type of *angulata* Grt. Mr. Butler has already shown that Mr. Grote did not correctly identify Walker's species, and redescribed it as *angulata*. In the Museum at Berlin are specimens from Brazil marked *cilisca* Gn., (Noct. II, 179), which I think will fall in with this species. The place assigned the genus here expresses my conviction that the genus is Orthosiid rather than Heliothid, though it may find closer allies on future study.

P. stilla Grt.

1880. Grt., No. Am. Ent., I, 15, *Pyrrhia*.
1881. Grt., Trans. Kans. Ac. Sci., VII, 68, *Pyrrhia*.
1882. Grt., Bull. Geol. Surv., VI, 564, *Pyrrhia*.

HABITAT.—Colorado; New Mexico; Western States.

The type is with Prof. Snow.

Genus **PARASTICHTIS** Hbn.

1816. Hbn., Verzeichniss, 212.

P. discivaria Wlk.*

1856. Wlk., C. B. Mus., Het., IX, 27, *Bryophila.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 8, *Jaspidea*
1882. Grt., Ill. Essay, 40, *Parastichtis.*
gentilis Grt.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 113, *Tæniosca.*
1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 432, *Dyschorista.*
1875. Grt., Can. Ent., VII, 226, pl. I, f. 1, *Parastichtis.*
1882. Grt., Ill. Essay, 40, pr. syn.
var. **perbellis** Grt.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 114, *Tæniosca.*
1875. Grt., Can. Ent., VII, 226, pl. I, f. 2, *Parastichtis.*
1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 432, *Dyschorista.*

HABITAT.—Hudson's Bay Territory; Canada in June and July; Northern, Eastern, Middle, and Central States, June and July and August.

Types of all the names are in the British Museum, and refer to the same species. *Dyschorista* Led., is the genus to which this species should be referred if Hübner's name does not apply. Mr. Grote has himself referred *perbellis* as a variety.

Genus **ORTHOSIA** Ochs.

1816. Ochs., Schmett. Eur., IV, 79.

O. purpurea Grt.*

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 125, *Orthosia.*
var. **crispa** Harv.
1875. Harv., Bull. Buff. Soc. Nat. Sci., II, 276, *Orthosia.*
1881. Butler, Papilio, I, 169, *Orthosia.*

HABITAT.—California, October and November.

The types are in the British Museum. *Crispa* is a paler form, but differs in nothing else. There is a very large series of specimens in the National Museum that makes the relationship between these two forms clear.

O. decipiens Grt.

1881. Grt., Bull. Geol. Surv., VI, 269, *Orthosia.*

HABITAT.—Northern Indiana in June.

The type is in the British Museum.

O. ralla G. & R.*

1868. G. & R., Trans. Am. Ent. Soc., I. 346, pl. VII, f. 49, *Xanthia*
1874. Morr., Proc. Ac. Nat. Sci. Phil., 1874, 66,=*ferruginoides.*
1875. Morr., Can. Ent., VII, 78,=*Orth. ferruginoides.*
1875. Lintner, Can. Ent., VII, 78, an bona species.

HABITAT.—Eastern and Middle States.

Specimens from the Grote collection are in the British Museum; but there is none marked type. I have no knowledge where the original specimens are at present.

O. bicolorago Gn.*

1852. Gn., Spec. Gen., Noct., I, 397, *Xanthia*.
1874. Grt., Bull. Buff. Soc. Nat. Sci. II, 124, var. *ferruginoides*.
1875. Morr., Proc. Ac. Nat. Sci., 1875, 66,=*ferruginoides*.
spurcata Wlk.
1857. Wlk., C. B. Mus., Het., XI, 749, *Xanthia*.
1868. G. & R., Trans. Am. Ent. Soc., III, 78, pr. syn.
var **ferruginoides** Gn.
1852. Gn., Spec. Gen., Noct., I, 398, *Xanthia ferruginea*, var.
1868. Bethune, Can. Ent., I, 47 (49), *Xanthia*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 124, *Orthosia*.
1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 66, *Xanthia*.
1875. Speyer, Stett. Ent. Zeit., XXXVI, 119, *Orthosia*.
bicolorago ‡ Wlk.
1856. Wlk., C. B. Mus., Het., X, 464, *Xanthia*.
1868. G. & R., Trans. Am. Ent. Soc., III, 78, pr. syn.

HABITAT.—Canada to Pennsylvania, west to the Mississippi Valley, August to November.

The types are all in the British Museum and refer to one species only. It is rather curious that *ferruginoides* should so long have stood for the species with *bicolorago* as the variety, while the opposite must be the status. *Bicolorago* precedes *ferruginoides* by one page and was described as a species; while *ferruginoides* was placed as a variety of the European *ferruginea*.

O. euroa G. & R.*

1873. G. & R., Trans. Am. Ent. Soc., IV, 131, *Xanthia*.
puta ‖ G. & R.
1868. G. & R., Trans. Am. Ent. Soc., I, 347, pl. 7, f. 50, *Xanthia*.
1873. G. & R., Trans. Am. Ent. Soc., IV, 431, n. b. l.

HABITAT.—Canada in July and September, to Pennsylvania, to the Mississippi Valley; Colorado.

I have not seen the type. Specimens named by Mr. Grote are in the British Museum.

O. inops Grt.*

1881. Grt., Bull. Geol. Surv., VI, 270, *Orthosia*.

HABITAT.—Kittery Point, Maine, in September.

The type is in the British Museum; duplicates are in Dr. Thaxter's collection.

O. hamifera Grt.

1888. Grt., Can. Ent., XX, 130, *Orthosia*.

HABITAT.—California.

I have not seen the type. It is probably in Mr. Grote's possession, or it may be with Mr. Jas. Behrens in San Francisco. It is said to be near *purpurea*, but larger.

O. aurantiago Gn.*

1852. Gn., Spec. Gen., Noct., I, 391, pl. 7, f. 1, *Xanthia.*
1856. Wlk., C. B. Mus., Het., x, 461, *Xanthia.*
1880. Grt., Can. Ent., XII, 186, *Orthosia.*
illiterata Grt.
1874. Grt., Proc. Ac. Nat. Sci. Phil., 1874, 211, *Pyrrhia.*
1880. Grt., Can. Ent., XII, 186, pr. syn.
differta Morr.
1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 67, *Orthosia.*
1880. Grt., Can. Ent., XII, 186, pr. syn.
illinoisensis French.
1879. French, Can. Ent., XI, 77, *Heliothis.*
1879. Grt., North Am. Ent., I, 16 = *illiterata.*

HABITAT.—New York to Florida; Illinois; Missouri; Massachusetts in August; Wisconsin.

The types of *aurantiago* and *illiterata* are in the British Museum. The type of *differta* is in the Tepper collection, while Prof. French has his own typical specimen.

O. americana Morr.

1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 431, *Orthosia.*

HABITAT.—New York.

The type is in the Tepper collection.

O. posticata Harv.

1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 8, *Orthosia.*

HABITAT.—Texas in November.

The type is in the British Museum.

O. citima Grt.

1883. Grt., Papilio, III, 74, *Orthosia.*

HABITAT.—Arizona.

The type is in the Neumœgen collection.

O. conradi Grt.*

1879. Grt., Bull. Geol. Surv., v, 203, *Orthosia.*

HABITAT.—Pennsylvania; New York; Middle and Eastern States. The type is in the British Museum.

O. helva Grt.*

1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 310. *Orthosia.*
1875. Grt., Can. Ent., VII, 84, *Orthosia.*

HABITAT.—Canada to Pennsylvania, August and September; west to the Mississippi Valley; Colorado.

The type is in the British Museum. This seems to be the species referred to by Mr. Grote as *circillaris,* in the Bull. Buff. Soc. Nat. Sci., II, 124.

O. lutosa Andrews.*

1877. Andrews, Can. Ent., IX, 99, *Orthosia.*
1878. Graef, Bull. Bkln. Ent. Soc., I, 93, *Orthosia.*

HABITAT.—Middle, Eastern, and Central States; Vermont; New York in June; New Jersey.

The type is with Mr. Akhurst, of Brooklyn.

O. immaculata Morr.

1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 433, *Orthosia.*

HABITAT.—Nevada.

The species was described from the collection of the Museum of Comparative Zoölogy at Cambridge, where the type now is.

O. belangeri Morr.

1874. Morr., Proc. Bost. Soc. N. H., XVII, 149, *Orthosia.*

HABITAT.—Canada.

The type is in the Tepper collection.

O. chloropha Hbn.

1806. Hbn., Samml. Ex. Schmett.,I, 16, f. 73, 74, *Xestia.*
1816. Hbn., Verzeichniss, 233, *Xestia.*
1856. Wlk., C. B. Mus., Het., X, 470, *Xestia.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 25, *Xanthia.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 125, *Orthosia.*
1880. Grt., Can. Ent., XII, 86, *Orthosia.*

HABITAT.—Georgia; Florida.

This species has not yet been identified in American collections.

Genus **HOMOGLÆA** Morr.

1875. Morr., Proc. Bost. Soc. N. H., XVIII, 240.

H. hircina Morr.*

1875. Morr., Proc. Bost. Soc. N. H., XVIII, 240, *Homoglæa.*
1878. Grt., Bull. Geol. Surv., IV, 181, *Homoglæa.*
1880. Grt., Bull. Bkln. Ent. Soc., III, 39, *Homoglæa.*

HABITAT.—Northern United States, east of the Rocky Mountains; Illinois.

The type is in the Neumœgen collection. A named specimen in the British Museum from the Grote collection is like my identification of the species and like the type.

H. carnosa Grt.*

1877. Grt., Can. Ent., IX, 21 et 70, *Glæa.*
1878. Grt., Bull. Geol. Surv., IV, 181, *Homoglæa.*

HABITAT.—Maine; New York; Massachusetts.

The type is in the British Museum. The species is recorded from Long Island, but I do not remember having seen it in local collections.

Genus **GLÆA** Hbn.

1806. Hübner, Tentamen.

In using the term *Glæa* and crediting it to Hübner, I follow Mr. Grote. I am not sure that our species of *Glæa* are entirely congeneric with the European species referred to *Cerastis* or *Orrhodia* and therefore prefer to use a distinctive term. As a matter of course, if our species do prove generically distinct, Hübner's name can not hold; but until a critical study settles these matters it will be safer to use a familiar term. *G. anchoecloides* has been listed under *Rhynchagrotis* and will be found replacing *cupida* Grt. In Can. Ent., XII, 155, Mr. Grote has listed the species and divided them into named sections, which he afterwards used as genera.

G. viatica Grt.*

1874. Grt., 6th Rept. Peab. Ac. Sci., 29, *Orthosia.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 125, *Glæa.*
1878. Grt., Bull. Geol. Surv., IV, 181, *Cerastis.*
1880. Grt., Can. Ent., XII, 155, *Glæa.*

HABITAT.—Massachusetts in October; New York; Alabama; Middle and Southern States; Texas in November.

The type is in the British Museum. It is perhaps the largest of our species, but has nearly the markings of *decliva*, which is referred to *Epiglæa.*

G. inulta Grt.*

1874. Grt., 6th Rept. Peab. Ac. Sci., 30, *Orthosia.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 125, pl. 1, f. 9, *Glæa.*
1878. Grt., Bull. Geol. Surv., IV, 181, *Cerastis.*
1880. Grt., Can. Ent., XII, 155, *Glæa.*

HABITAT.—Canada to Virginia, west to Illinois; Iowa. September and October.

The type is in the British Museum. It is perhaps our most common species.

G. olivata Harv.

1874. Harv., Bull. Buff. Soc. Nat. Sci., II. 120, *Glæa.*
1878. Grt., Bull. Geol. Surv., IV, 181, *Cerastis.*
1880. Grt., Can. Ent., XII, 155, *Glæa.*

HABITAT.—California in September.

The type is in the British Museum.

G. signata French.*

1879. French, Can. Ent., XI, 76, *Orthosia.*
anchoecloides ‡ Grt.
1679. Grt., No. Am. Ent., I, 16, *Glæa.*

HABITAT.—Middle and Central States; New York; Illinois; District of Columbia in April.

Prof. French has his own type and has kindly sent me a duplicate. Guenée's description would be distinctly applicable were the generic reference correct.

G. sericea Morr.*

1874. Morr., Proc. Bost. Soc. N. H., XVII, 151, *Glæa.*
1878. Grt., Bull. Geol. Surv., IV, 181, = *venustula.*
1880. Grt., Bull. Bkln. Ent. Soc., III, 37, = *venustula.*
1890. Grt., Revised List Noct., 27, note 16, an sp. dist.

HABITAT.—Massachusetts in October; Illinois; Middle and Central States, September and October; Wisconsin; District of Columbia.

I have not seen the type and have no knowledge of its present whereabouts. Mr. Grote, after referring his species *venustula* as a synonym of that described by Mr. Morrison, now claims it distinct. As I have not had an opportunity of comparing types, I accept Mr. Grote's latest reference until further study decides the matter.

Genus **EPIGLÆA** Grt.

1878. Grt., Bull. Geol. Surv., IV, 181.

E. pastillicans Morr.*

1874. Morr., Proc. Bost. Soc. Nat. Hist., XVII, 151, *Glæa.*
1878. Grt., Bull. Geol. Surv., IV, 181, *Epiglæa.*

HABITAT.—New Hampshire in September; Massachusetts in October; New York in September; District of Columbia in October.

I have not seen the type, nor do I know where it is at present.

E. tremula Harv.*

1874. Harv., Bull. Buff. Soc. Nat. Sci., II, 276, *Glæa.*
1878. Grt., Bull. Geol. Surv., IV, 181, *Epiglæa.*

HABITAT.—Texas in November.

The type is in the British Museum.

E. venustula Grt.

1875. Grt., Can. Ent., VII, 84, *Glæa.*
1878. Grt., Bull. Geol. Surv., IV, 181, *Epiglæa.*
1890. Grt., Revised List Noct., 27, note 16, *Epiglæa.*

HABITAT.—Maryland.

The type is in Dr. Lintner's collection.

E. apiata Grt.*

1874. Grt., 6th Rept. Peab. Ac. Sci., 30, *Orthosia.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 125, pl. i, f. 8, *Glæa.*
1878. Grt., Bull. Geol. Surv., IV, 181, *Epiglæa.*

HABITAT.—Massachusetts in October; New York in September; Illinois; Middle and Central States.

The type is in the British Museum.

E. decliva Grt.*

1874. 6th Rept. Peab. Ac. Sci., 30, *Orthosia.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 125, *Glæa.*
1878. Grt., Bull. Geol. Surv., IV, 181, *Epiglæa,*

deleta Grt.
1877. Grt., Psyche, II, 80, *Glæa.*
1878. Grt., Bull. Geol. Surv., IV, 181, *Epiglæa.*
1890. Grt., Revised List Noct., 27, pr. var.

HABITAT.—Canada in September and October; Eastern, Middle, and Central States; Massachusetts in September; District of Columbia in October.

The type of *declira* is in the British Museum. Of *deleta* Mr. Thaxter has typical specimens, and these are not different from the usual forms of *declira.*

Genus **ORRHODIA** Hbn.
1816. Hbn., Verzeichniss, 231.

O. californica Smith.*

1891. Smith, Trans. Am. Ent. Soc., XVIII, 113, *Orrhodia.*

HABITAT.—Sierra Nevada, California.

The type is in the National Museum. This seems more nearly congeneric with the European species.

Genus **XANTHIA** Ochs.
1816. Ochs., Schmett. Eur., IV, 82.

X. flavago Fabr.*

1787. Fabr., Mant. Ins., 160, *Noctua.*
1857. Wlk., C. B. Mus., Het., XI, 715, *Gortyna.*
togata Esp.
1788. Esper, Schmett. Eur., pl. 124, f. 1, *Noctua.*
1876. Speyer, Stett. Ent. Zeit., XXXVI, 204, *Xanthia.*
silago Hbn.
1800. Hbn., Samml. Eur. Schmett., Noct., 191, *Noctua.*
1816. Hbn., Verzeichniss, 234, *Citria.*
1852. Gn., Spec. Gen., Noct., I, 394, *Xanthia.*
1856. Wlk., C. B. Mus., Het., X, 461, *Xanthia.*

HABITAT.—Canada; Northern and Eastern States; Northern New York, September.

I follow Staudinger in the synonymy. Staudinger, Walker, and Guenée should be consulted for European bibliography. The insect seems to have been very little referred to in our own literature.

X. puta G. & R.

1868. G. & R., Trans. Am. Ent. Soc., I, 347, pl. 7, f. 50, *Xanthia.*

HABITAT.—Northern and Eastern States; New York.

I have not seen the type and do not know its present whereabouts.

Genus **JODIA** Hbn.
1816. Hbn., Verzeichniss, 234.

J. rufago Hbn.*

1818. Hbn., Zutraege, 15, ff. 61, 62, *Jodia.*
1816. Hbn., Verzeichniss, 234, *Jodia.*
1852. Gn., Spec. Gen., Noct., I, 392, *Xanthia.*
1856. Wlk., C. B. Mus., Het., X, 461, *Xanthia.*

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 25, *Xanthia.*
1880. Grt., Can. Ent., XII, 86, *Jodia.*
honesta Wlk.
1859. Wlk., C. B. Mus., Het., XIV, 1711, *Cirrœdia.*

HABITAT.—Canada to Florida, west to Texas; Massachusetts and New Jersey in April; Texas in March, February, and May.

Walker's type is in the British Museum and is the same as the *Jodia rufago* of that collection.

Genus **CIRRŒDIA** Gn.

1852. Gn., Spec. Gen., Noct., I, 401.

C. pampina Gn.*

1852. Gn., Spec. Gen., Noct., I, 402, pl. 7, f. 2, *Cirrœdia.*
1856. Wlk., C. B. Mus., Het., X, 472, *Cirrœdia.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 24, *Atethmia.*
1874. Morr., Can. Ent., VI, 259, *Cirrœdia.*
1875. Grt., Can. Ent., VII, 206, *Eucirrœdia.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 160, *Eucirrœdia.*

HABITAT.—Nova Scotia, southward to Virginia, west to the Rocky Mountains, August to October.

Guenée's type is in the British Museum. I can not see the slightest basis for Mr. Grote's genus in his description of it.

Genus **SCOLIOPTERYX** Germ.

1812. Germ., Syst. Gloss. Prodromus, 14.

S. libatrix Linn.*

1758. Linn., Syst. Nat., ed. X, 507, *Bombyx.*
1767. Linn., Syst. Nat., ed. XII, 831, *Bombyx.*
1781. Fabr., Spec. Ins., II, 224, *Noctua.*
1793. Fabr., Ent. Syst., III, 2, 64, *Noctua.*
1816. Hbn., Verzeichniss, 248, *Euphemias.*
1825. Treitschke, Schmett. Eur., V, 2, 172, *Calpe.*
1852. Gn., Spec. Gen., Noct., II, 405, *Gonoptera.*
1858. Wlk., C. B. Mus., Het., XIII, 1010, *Scoliopteryx.*
1874. Lintner, Ent. Cont., III, 164, larva.
1875. Speyer, Stett. Ent. Zeit., XXXVI, 167, *Scoliopteryx.*
1879. Andrews, Psyche, II, 272, *Scoliopteryx*, larva.
1881. Coquillett, Papilio, I, 56, larva.

HABITAT.—Nova Scotia: Hudson Bay Territory; south to Texas, west to California; New Mexico, May to November.

Most of the European bibliography is omitted. Reference should be made to Staudinger, Walker, and Guenée.

Genus **SCOPELOSOMA** Curtis.

1838. Curtis, British Insects, XIV, 635.

A revision of the species of this genus is in Entomologica Americana for 1890, volume VI, p. 146. An examination of the types of all the species in the British Museum and elsewhere shows that the identifications made and characters given are correct. Only one change in name is necessitated. All the species appear in the autumn and winter as imagos, reappearing in early spring.

S. indirecta Wlk.*

1857. Wlk., Cat. Brit. Mus., Het., x, 468, *Xanthia*.
graefiana Grt.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 69, *Scopelosoma*.
1882. Grt., Bull. Geol. Surv., VI, 583, *Scopelosoma*.

HABITAT.—District of Columbia and northward.

The Grote and Walker types are both in the British Museum, and I regret that I can not find any differences between them. Walker's species is from "locality unknown."

S. moffatiana Grt.*

1882. Grt., Bull. Geol. Surv., VI, 583, *Scopelosoma*.
graefiana ‡ Grt.
1882. Grt., Ill. Essay, 65, pl. 3, f. 38, *Scopelosoma*.
1882. Grt., Bull. Geol. Surv., VI, 583, pr. syn.
1888. Pearsall, Ent. Amer., IV, 59, larva.

HABITAT.—District of Columbia and northward.

This species does not seem to be in the British Museum. The type is with Mr. Neumœgen.

S. pettiti Grt.*

1875. Grt., Can. Ent., VII, 188, *Scopelosoma*.
1877 Grt., Can. Ent., IX, 213, *Scopelosoma*.

HABITAT.—Canada; New York; Iowa.

The type is in the British Museum.

S. ceromatica Grt.*

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 70, *Scopelosoma*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 125, *Xanthia*.

HABITAT.—New Jersey; New York; New Hampshire; Maine; Canada.

The type is the British Museum.

S. tristigmata Grt.*

1877. Grt., Can. Ent., IX, 156, *Scopelosoma*.
1884. Thaxter, Can. Ent., XVI, 33, life history.

HABITAT.—District of Columbia, northward.

The type is in the British Museum.

S. walkeri Grt.*

1864. Grt., Proc. Ent. Soc. Phil., II, 439, pl. 9, f. 5, *Dichagramma*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 192, *Scopelosoma*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 71, an var. *sidus*.
1875. Grt., List Noctuidæ, 14, an sp. dist.
1882. Grt., New List, 32, an var. *sidus*.
1884. Thaxter, Can. Ent., XVI, 31, an sp. dist.—life history.

HABITAT.—Texas; Iowa; New York; Maine; Canada.

I did not see this species in the British Museum. I do not know where the type is.

S. sidus Gn.*

1852. Gn., Spec. Gen., Noct., I, 386, *Scopelosoma.*
1856. Wlk., C. B. Mus., Het., X, 454, *Eupsilia.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 191, *Scopelosoma.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 71, *Scopelosoma.*
rinulenta Grt.
1864. Grt., Proc. Ent. Soc. Phil., II, 440, pl. 9, f. 6, *Dichagramma.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 191, pr. syn.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 70, an sp. dist.
1882. Grt., New List, 32, an var. *sidus.*
1884. Thaxter, Can. Ent., XVI, 32, life history.

HABITAT.—Texas; New York, and northward.

Guenée's type is in the British Museum and is like Mr. Grote's *rinulenta.*

S. morrisoni Grt.*

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 70, *Scopelosoma.*
1884. Thaxter, Can. Ent., XVI, 30, life history.

HABITAT.—New York; Massachusetts, northward to Canada.

The type is in the British Museum.

S. devia Grt.*

1874. Grt., Proc. Ac. Nat. Sci. Phil., 1874, 209, *Scopelosoma.*
1884. Thaxter, Can. Ent., XVI, 33, life history.

HABITAT.—New York and northward.

This type is in the British Museum.

Genus LITHOLOMIA Grt.

1875. Grt., Can. Ent., VII, 206.

L. napæ Morr.*

1874. Morr., Proc. Bost. Soc. N. H., XVII, 152, *Scopelosoma.*
1875. Grt., Can. Ent., VII, 206, 207, pl. I, f. 4, *Litholomia.*

HABITAT.—Canada in May; Massachusetts; New York; Northern and Eastern States; Colorado; California in September.

I have not seen the type, nor do I know where it is at present.

L. dunbari Harv.

1876. Harv., Can. Ent., VIII, 52, *Hadena.*

HABITAT.—Vancouver.

The type is in the Edwards collection and is fully congeneric with and closely allied to *napæ* Morr. It is scarcely likely that the two will prove to be identical, but the differences are reducible to small variations in markings and are in no sense generic. I have handled a very large number of specimens of *napæ*, without finding a *dunbari* among them.

Genus XYLINA Ochs.

1816. Ochs., Schmett. Eur., IV, 85.

I use this name in preference to *Lithophane* because both are catalogue names and *Xylina* has priority. The Verzeichniss was not published until 1818 at least. All the species so far as known to me appear in autumn, hibernate, and reappear in early spring.

X. disposita Morr.*

1874. Morr., Bull. Buff. Soc. Nat. Sci., II, 116, *Lithophane.*

HABITAT.—Canada; Massachusetts; New York in April and May. I have not seen the type and do not know where it is.

X. hemina Grt.

1879. Grt., Bull. Geol. Surv., v, 202, *Lithophane.*

HABITAT.—Northern and Eastern States; New York in September. The type is in the British Museum.

X. signosa Wlk.*

1857. Wlk., C. B. Mus., Het., XI, 627, *Xylina.*
petulea Grt.
1874. Grt., 6th Rept. Peab. Ac. Sci., 31, *Lithophane.*
1891. Butler, Entomologist, XXIV, 242, pr. syn.

HABITAT.—Canada; Northeastern United States.

The types are both in the British Museum and refer to the same species. Mr. Grote has misidentified Walker's species, the *signosa* Grote remaining unnamed.

X. gausapata Grt.

1883. Grt., Papilio, III, 77, *Lithophane.*

HABITAT.—California.

The type should be in Mr. Neumoegen's collection.

X. ferrealis Grt.*

1874. Grt., 6th Rept. Peab. Ac. Sci., 32, *Lithophane.*

HABITAT.—New York; Maine; Canada.

The type is in the British Museum. A long series of specimens in Dr. Thaxter's collection some years ago led me to believe in a rather close relation between *ferrealis* and *signosa* (*petulea*). I have not studied them since.

X. innominata nom nov.*

signosa ‡ Grt.
1874. Grt., 6th Rept. Peab. Ac. Sci., 33, *Lithophane.*

HABITAT.—Northeastern United States; Canada; Colorado.

The new name is intended to apply to that species identified and labeled as *signosa* by Mr. Grote and has no type specimen.

X. bethunei G. & R.*

1868. G. & R., Trans. Am. Ent. Soc., I. 354, pl. 7, f. 56, *Xylina.*
1869. Bethune, Can. Ent., I, 86, *Xylina.*
1874. Grt., 6th Rept. Peab. Ac. Sci., 33. *Lithophane.*

HABITAT.—Canada; Northern, Eastern, and Middle States.

I do not know where the type of this species is at present.

X. oriunda Grt.*

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 160, *Lithophane.*

HABITAT.—Canada; Wisconsin.

I have not seen the type and do not know where it is.

X. semiusta Grt.*

1874. Grt., 6th Rept. Peab. Ac. Sci., 34, *Lithophane.*

HABITAT.—Canada; New York; Vermont; Maine.

A type is in the British Museum; another in the Tepper collection.

X. contenta Grt.

1880. Grt., Can. Ent., XII, 216, *Lithophane.*

HABITAT.—California.

The type is in the British Museum.

X. fagina Morr.*

1874. Morr., Bull. Buff. Soc. Nat. Sci., II, 115, *Lithophane.*
1887. Grt., Can. Ent., XIX, 54, *Lithophane.*

HABITAT.—Massachusetts; New York.

The type is in the Tepper collection.

X. oregonensis Harv.

1876. Harv., Can. Ent., VIII, 55, *Lithophane.*

HABITAT.—Oregon; California; Colorado.

The type is in the Hy. Edwards collection.

X. georgii Grt.*

1875. Grt., Can. Ent., VII, 188, *Lithophane.*
1887. Grt., Can. Ent., XIX, 55, *Lithophane.*

HABITAT.—Canada; Maine; New York; Northern and Eastern States; Colorado.

The type is in the British Museum.

X. antennata Wlk.*

1858. Wlk., C. B. Mus., Het., XIV, 1733, *Xylina.*
1883. Saund., Fruit Insects, 138, f. 138, *Lithophane.*
cinerea Riley.
1871. Riley, 3d Rept. Ins. Mo., 135, f. 57, *Xylina.*
1874. Grt., 6th Rept. Peab. Ac. Sci., 34, *Lithophane.*
1879. Grt., Bull. Geol. Surv., V, 201, pr. syn.
1881. Riley, Index and Supplt. to Mo. Repts., 74, *Lithophane.*
1882. Riley, Papilio, II, 43, 101, an sp. dist. ?
1882. Fernald, Papilio, II, 63, pr. syn.
1891. Butler, Entomologist, XXIV, 242, pr. syn.

HABITAT.—Canada to District of Columbia: west to Nebraska.

Walker's type is in the British Museum and Dr. Riley's specimens are in the National Museum. The species has an economic bibliography not included here.

X. laticinerea Grt.*

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 27, *Lithophane.*
1882. Riley, Papilio, II, 102, an var. *antennata.*
1883. Hy. Edw., Papilio, III, 135, larva.
1891. Butler, Entomologist, XXIV, 212, = *antennata.*

HABITAT.—With *antennata.*

The type is in the British Museum.

X. grotei Riley.*

1882. Riley, Papilio, II, 102, an var. *antennata.*
1887. Grote, Can. Ent., XIX, 54, *Lithophane.*
cinerosa, ‖ Grt.
1879. Grt., Bull. Geol. Surv., V, 202, *Lithophane.*
1882. Riley, Papilio, II, 102, *nomen bis lectum.*

HABITAT.—With *antennata.*

Mr. Grote's type is in the British Museum. Dr. Riley's name has the same type. I keep the names *antennata*, *laticinerea*, and *grotei* as representing distinct species, pending a critical study of the genus. It is not at all impossible that distinctive characters can be found which need not be "imagined," as Mr. Butler suggests they would be.

X. unimoda Lint.*

1878. Lint., Ent. Cont., IV, 96, *Xylina.*

HABITAT.—Canada; New York in October; Vermont; Northern and Eastern States.

The type is in the Hill collection.

X. tepida Grt.*

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 27, *Lithophane.*

HABITAT.—Massachusetts; New York; Northern and Eastern States.

A type is in the British Museum; another in the Tepper collection.

X. baileyi Grt.*

1877. Grt., Can Ent., IX, 86, *Lithophane.*

HABITAT.—New York.

The type is in the British Museum.

X. querquera Grt.*

1874. Grt., 6th Rept. Peab. Ac. Sci., 34, *Lithophane.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, pl. I, f. 5, *Lithophane.*
1882. Grt., Ill. Essay, 57, pl. 2, f. 21, *Lithophane.*

HABITAT.—Missouri; New York.

The type is in the British Museum.

X. viridipallens Grt.

1877. Grt., Can. Ent., IX, 215, *Lithophane.*
1878. Grt., Bull. Geol. Surv., IV, 180, *Lithophane.*
1882. Grt., Ill. Essay, 57, pl. 2, f. 22, *Lithophane.*

HABITAT.—Massachusetts; New York.

A type is in the British Museum; another is in Dr. Thaxter's collection.

X. lepida Lint.*

1878. Lint., Ent. Cont., IV, 95, *Xylina.*
1878. Grt., Bull. Geol. Surv., IV, 181, *Lithophane.*

HABITAT.—Canada; Maine; New York.

The type is in the Hill collection.

X. thaxteri Grt.*

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 196, *Lithophane.*
1875. Grt., List Noctuidæ, pl. f. 3, *Lithophane.*
1876. Speyer, Stett. Ent. Zeit., 1876, 203, an var. *lambda.*
1878. Lint., Ent. Cont., IV, 127, an var. *lambda.*
1882. Grt., Proc. Am. Phil. Soc., XXI, 160, ? an var. *conformis.*
1891. Butler, Entomologist, XXIV, 263,=*lambda.*

HABITAT.—Canada; Maine; Massachusetts; New York.

The type is in the British Museum. There is very good authority for making this a synonym or at least a variety of *lambda;* but I do not feel ready to admit the identity without a more critical study than has yet been made.

X. pexata Grt.*

1874. Grt., 6th Rept. Peab. Ac. Sci., 35, *Lithophane.*
1878. Graef, Bull. Bkln. Ent. Soc., I, 10,=*ingrica.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 160, ?=*ingrica.*
var. **washingtonia** Grt.
1883. Grt., Papilio, III, 74, *Lithophane.*

HABITAT.—Canada; Northern, Eastern, and Middle States; Washington.

The type of the species is in the British Museum; that of the variety is with Mr. Neumœgen.

X. capax G. & R.*

1868. G. & R., Trans. Am. Ent. Soc., I, 355, pl. 7, f. 57, *Xylina.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 145, *Anytus.*
1878. Grt., Bull. Geol. Surv., IV, 180, *Lithophane.*

HABITAT.—Canada; Northern, Eastern and Middle States; Colorado.

A specimen marked type, by Mr. Grote, is in the British Museum. The species is certainly not a *Xylina*, but seems to be congeneric with *Polia acutissima.* As the latter is not a *Polia*, nothing would be gained in accuracy by getting *capax* into that genus at present.

X. carbonaria Harv.*

1876. Harv., Can. Ent., VIII, 55, *Lithophane.*

HABITAT.—Oregon; California; Colorado.

The type is in the Hy. Edwards collection. This also must be removed from *Xylina*, the species affording a quite remarkable structural character.

X. patefacta Wlk.

1858. Wlk., C. B. Mus., Het., XIV, 1733, *Xylina.*

HABITAT.—Canada.

The type is at Oxford, in the Saunders collection.†

Genus NYSTALEA Gn.

1852. Gn., Spec. Gen., Noct., II, 122.

N. indiana Grt.

1884. Grt., Papilio, IV, 7, *Nystalea.*
1891. Smith, List Lepidoptera, 50, an *Bombycia* ?

HABITAT.—Indian River, Florida.

The type is in Mr. Neumœgen's collection. I have seen it and believe it a *Bombycia*, but have not had an opportunity of studying the specimen. It is certainly not a *Nystalea*, of which I saw several species in the Berliner Museum.

Genus MORRISONIA Grt.

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 53.

The genera *Morrisonia* and *Xylomiges* have been monographically treated by me in the Proc. U. S. National Museum for 1892, vol. XV, pp. 64–86. All the species are there described; but specific reference to this paper is here made only when necessary to accredit a species or authenticate a generic change.

M. mucens Hbn.*

1816. Hbn., Verzeichniss, 243, *Septis.*
1825. Hbn., Zutræge, III, 25, f. 415, 416, *Septis.*
1852. Gn., Spec. Gen., Noct., I, 142, *Xylophasia.*
1856. Wlk., C. B. Mus., Het., IX, 177, *Xylophasia.*
1861. H. Sch., Corr. Blatt, II, 74, *Xylomiges.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 110, *Hadena.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 28, *Xylomiges.*
1879. Grt., Can. Ent., XI, 206, *Mamestra.*
1880. Grt., Can. Ent., XII, 117, *Mamestra.*
1892. Smith, Proc. U. S. Nat. Mus., XV, 79, *Morrisonia.*
spoliata Wlk.
1857. Wlk., C. B. Mus., Het., XI, 759, *Xylina.*

HABITAT.—Middle, Southern, and Central States; Texas, March 10 to April 2; Missouri, March 25 to April 19.

The type of *spoliata* is in the British Museum and is this common Southern species. The locality given was "East Florida."

M. rileyana Smith.*

1890. Smith, Ent. Amer., VI, 212, *Morrisonia.*

HABITAT.—Missouri in April; Texas in March.

The type is in the National Museum.

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† Mr. Schaus has sent me a figure which proves the species a good one, allied to *innominata* m., (signosa ‡ Grt.). I have a specimen from Canada.

M. bisulca Grt.*

1881. Grt., Can. Ent., XIII, 230, *Mamestra.*
1891. Smith, List Lepidoptera, 50, *Morrisonia.*

HABITAT.—Arizona.

Types are in the Neumœgen collection and in the British Museum.

M. sectilis Gn.*

1852. Gn., Spec. Gen., Noct., I, 141, *Xylophasia.*
1856. Wlk., C. B. Mus., Het., IX, 177, *Xylophasia.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., 1, 109, *Hadena.*
1891. Butler, Entomologist, XXIV, 264,=*mucens.*
evicta Grt.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 84, pl. II, f. 18, *Cloantha.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 16, *Actinotia.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 53, *Morrisonia.*
var. **vomerina** Grt.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 84, pl. II, f. 17, *Cloantha.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 16, *Actinotia.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 53, *Morrisonia.*
1879. Grt., Can. Ent., XI, 207, an var. pr. ?
1890. Grt., Revised Check List, 24, pr. var.

HABITAT.—Middle and Central States; Canada, New York, and New Jersey, in April and May; Illinois, April and October.

All the types are in the British Museum. Mr. Butler has erroneously referred *sectilis* to *mucens.* The type is a poor specimen of the normal form of *evicta.* It would have been utterly impossible to recognize this species from the description alone.

M. peracuta Morr.*

1874. Morr., Bull. Buff. Soc. Nat. Sci., II, 114, *Morrisonia.*

HABITAT.—California or Texas.

Types are in the National Museum and in the Tepper collection. My notes indicate that there is another specimen marked "type" in the British Museum. All are without definite locality.

M. infidelis Grt.

1879. Grt., Can. Ent., XI, 206, *Morrisonia.*

HABITAT.—Michigan.

The type is in the British Museum, and seems t [illegible] agreeing fairly well with the description.

M. confusa Hbn.*

1816. Hbn., Verzeichniss, 243, *Auchmis.*
1823. Hbn., Zutræge, III, 495, 496, *Auchmis.*
1852. Gn., Spec. Gen., Noct., I, 142, *Xylophasia.*
1856. Wlk., C. B. Mus., Het., IX, 178, *Xylophasia.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., 1, 110, *Hadena.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 12, *Mamestra.*
1880. Grt., Can. Ent., XII, 118, *Mamestra.*

1892. Smith, Proc. U. S. Nat. Mus., xv, 85, *Morrisonia.*
infructuosa Wlk.
1857. Wlk., C. B. Mus., Het., xi, 627, *Xylina.*
multifaria Wlk.
1857. Wlk., C. B. Mus., Het., xi, 628. *Xylina.*

HABITAT.—Canada to Texas to California. United States generally; Eastern States in April and May.

Walker's types are in the British Museum, and are more or less imperfect specimens of this common species.†

Genus **XYLOMIGES** Gn.

1852. Gn., Spec. Gen., Noct., i, 147.

X. hiemalis Grt.*

1874. Grt., Bull. Buff. Soc. Nat. Sci., ii, 71, *Xylomiges.*
californica Behr.
1874. Behr, in Strk. Lep. Rhop. et Het., 94, *Dryobota.*
1876. Grt., Can. Ent., viii, 26, pr. syn.
1878. Grt., Bull. U. S. Geol. Surv., iv, 178, *Xylomiges.*
1879. Grt., Can. Ent., xi, 29, pr. syn

HABITAT.—California in January.

The type is in the British Museum.

X. peritalis Smith.

1892. Smith, Proc. U. S. Nat. Mus., xv, 68, *Xylomiges.*

HABITAT.—Colorado; Oregon.

The type is in the Neumœgen Collection.

X. simplex Wlk.*

1865. Wlk., C. B. Mus., Het., xxxii, 618. *Acronycta.*
crucialis Harv.
1875. Harv., Bull. Buff. Soc. Nat. Sci., ii, 277, *Xylomiges.*

HABITAT.—Vancouver; California; Colorado in May and October; Portland, Oregon, April and May.

The types of both names are in the British Museum. I failed to see the type of *simplex* in the British Museum, as it was not ranged among the true noctuids of Mr. Butler's first study. Afterward, Mr. Butler very kindly sent me a figure of the species which made it certain that it was no *Acronycta*, but was too sketchy to make out positively. Yet later Mr. Butler stumbled on *Xylomiges crucialis* Harv., and recognized in it Walker's *Acronycta simplex.*

X. curialis Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., i, 143, *Xylomiges.*

HABITAT.—California in March.

The type is in the Museum of Comparative Zoölogy at Cambridge.

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† See note on p. 174.

X. dolosa Grt.*

1880. Grt., Can. Ent., XII, 88, *Xylomiges.*

HABITAT.—Maine; Plattsburgh, New York; White Mts., New Hampshire; Colorado.

The type is in the British Museum.

X. rubrica Harv.*

1878. Harv., Can. Ent., x, 58, *Graphiphora.*
1882. Grt., New Check List, 31, *Xylomiges.*
1887. Smith, Proc. U. S. Nat. Mus., x, 462, *Mamestra.*
1892. Smith, Proc. U. S. Nat. Mus., xv, 72, *Xylomiges.*

HABITAT.—California in May; Oregon in May.

The type is in the British Museum.

X. perlubens Grt.*

1881. Grt., Can. Ent., XIII, 132, *Xylomiges.*
1892. Smith, Proc. U. S. Nat. Mus., xv, 71, *Xylomiges.*
subapicalis Smith.
1887. Smith, Proc. U. S. Nat. Mus., x, 462, *Mamestra.*
1892. Smith, Proc. U. S. Nat. Mus., xv, 73, *Xylomiges.*

HABITAT.—Colorado; Washington; California in June; Portland, Oregon, April and May.

Mr. Grote's type is in the British Museum and is like my *subapicalis*, the type of which is in the National Museum. I suspected the identity of the two, but could not make Mr. Grote's description fit sufficiently well to risk the identification.

X. ochracea Riley.*

1892. Riley, Proc. U. S. Nat. Mus., xv, 74, *Xylomiges.*

HABITAT.—California, October, November.

The types are in the U. S. National Museum.

X. patalis Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 144, pl. IV, f. 11, *Xylomiges.*
fletcheri Grt.
1888. Grt., Can. Ent., xx, 130, *Xylomiges.*
1891. Smith, List Lepidoptera, 50, pr. syn.

HABITAT.—Vancouver; California in April, May, June, and November.

The type of *patalis* is in the Museum of Comparative Zoölogy at Cambridge; that of *fletcheri* I have not seen; but there is a specimen under this name received from Mr. Fletcher as typical, in the National Museum, which is not in the least different from typical *patalis*.

X. tabulata Grt.

1878. Grt., Bull. U. S. Geol. Surv., IV, 181, *Xylomiges.*
1892. Smith, Proc. U. S. Nat. Mus., xv, 76, ? *Xylomiges.*

HABITAT.—New York.

The types are in the British Museum and in the Hill collection. Both are females and look like a *Mamestra* allied to *anguina*. It will require a male to decide the generic location.

Genus **LITHOMIA** Hbn.

1816. Hbn., Verzeichniss, 241.

L. germana Morr.*

1874. Morr., Bull. Buff. Soc. Nat. Sci., II, 192, *Calocampa*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 198, *Lithomia*.
1878. Græf, Bull. Bkln. Ent. Soc., I, 10, *solidaginis*.
1883. Grt., Proc. Am. Phil. Soc., XIX, 160, =*solidaginis*.
solidaginis ‡ Wlk.
1857. Wlk., C. B. Mus., Het., XI, 618, 759, *Lithomia*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 27, *Calocampa*.

HABITAT.—Hudson Bay Territory; Northern and Eastern States; New York, September.

I have not seen the type, nor do I know where it is at present. It may be that the American is the same as the European species; but I am not sufficiently convinced of it to make the reference.

Genus **PLEROMA** Smith.

1891. Smith, Trans. Am. Ent. Soc., XVIII, 113.

P. obliquata Smith.*

1891. Smith, Trans. Am. Ent. Soc., XVIII, 114, *Pleroma*.

HABITAT.—Colorado; Sierra Nevada, California.

The type is in the National Museum; duplicates are in the Edwards and Neumœgen collections.

P. conserta Grt.

1881. Grt., Papilio, I, 58, *Valeria*.

HABITAT.—Washington.

The type is in the British Museum. It is an ally of my species, but more suffused with blackish than any specimen I have seen. The type of maculation is identical and the relationship is close.

Genus **CALOCAMPA** Steph.

1829. Steph., Ill. Brit. Ent., Haust., II, 174.

C. nupera Lint.*

1874. Lint., Bull. Buff. Soc. Nat. Sci., II, 188, *Calocampa*.
1874. Morr., Bull. Buff. Soc. Nat. Sci., II, 190, *Calocampa*.
1878. Thaxter, Psyche, II, 122, larva.
vetusta ‡ Wlk.
1857. Wlk., C. B. Mus., Het., XI, 619, *Calocampa*.
1874. Grt., 6th Rept. Peab. Ac. Sci., 22, *Calocampa*.
1874. Lint., Bull. Buff. Soc. Nat. Sci., II, 180, pr. syn.

HABITAT.—Hudson Bay territory, southward to District of Columbia, west to Nebraska, April, May, September, October.

The type is in Dr. Lintner's collection.

C. cineritia Grt.*

1874. Grt., Proc. Ac. Nat. Sci. Phil., 1874, 210, *Calocampa*.
1882. Grt., Illustrated Essay, 58, pl. 2, p. 23, *Calocampa*.
var. thoracica Put. Cram.
1886. Putman-Cramer, Ent. Amer., II, 142, var. pr.

HABITAT.—Canada; New Hampshire; New York, April and May; west to Colorado; Portland, Oregon, April and May.

The type of the species is in the British Museum; that of the variety is now in Mr. Doll's collection, I believe.

C. brucei Smith.*

1892. Smith, Ent. News, III, 252, pl. X, *Calocampa*.

HABITAT.—Colorado, front range of Rocky Mountains.

The types are in the National Museum and in the Rutgers College collection.

C. curvimacula Morr.*

1874. Morr., Bull. Buff. Soc. Nat. Sci., II, 191, *Calocampa*.
1878. Thaxter, Psyche, II, 122, larva.

HABITAT.—Canada; Northern and Eastern States; New York, May and September; Portland, Oregon, in April.

I have not seen the type and do not know where it is at present.

Genus CLEOPHANA Bdv.

1832. Bdv., Chen. d'Europe, 151.

C. eulepis Grt.

1875. Grt., Bull. Buff. Soc. Nat. Sci., III, 86, *Cleophana*.
1876. Grt., Stett. Ent. Zeit., XXXVII, 136, *Cleophana*.
1883. Grt., Proc. Am. Phil. Soc., XXI, 161, *Cleophana*.

HABITAT.—Oregon; California.

The type is in the Hy. Edwards collection.

C. antipoda Strck.*

1875. Strck., Lep. Rhop. et Het., 129, *Cucullia*.
1880. Grt., Can. Ent., XII, 217, *Cleophana*.

HABITAT.—Colorado; Arizona.

The type is in the Strecker collection.

Genus CUCULLIA Schrank.

1802. Schrank, Fauna Boica, II, 157.

A monographic revision of this genus will be found in the Proceedings U. S. National Museum for 1892, vol. XV, pp. 32–51, where all the species are fully discussed. Reference to this paper is made only where necessary to accredit a species or authenticate a change.

C. convexipennis G. & R.*

1868. Grt. & Rob., Trans. Am. Ent. Soc., II, 201, pl. III, f. 76, *Cucullia*.
1869. Bethune, Can. Ent., I, 86, *Cucullia*.
1874. Lintner, Ent. Cont., III, 138, 170, *Cucullia*.

HABITAT.—Canada; New York in July and August, to Pennsylvania; Ohio; Delaware in August.

I have not seen the type; but the species is unmistakable.

C. montanæ Grt.*

1882. Grt., Can. Ent., XIV, 175, *Cucullia.*

HABITAT.—Colorado in June; Montana.

The type is in the Neumœgen collection.

C. similaris Smith.*

1892. Smith, Proc. U. S. Nat. Mus., XV, 40, *Cucullia.*

HABITAT.—Colorado, 6,500 feet; Denver in June.

The type is in the National Museum.

C. obscurior Smith.*

1892. Smith, Proc. U. S. Nat. Mus., XV, 40, *Cucullia.*

HABITAT.—Colorado.

The type is in the National Museum.

C. asteroides Gn.*

1852. Gn. Spec. Gen., Noct., II, 133, *Cucullia.*
1857. Wlk., C. B. Mus., Het., XI, 656, *Cucullia.*
1874. Lintner, Ent. Cont., III, 139, 169, *Cucullia.*
1875. Speyer, Stett. Ent. Zeit., XXXVI, 154, *Cucullia.*

HABITAT.—Canada to Virginia to Nebraska. New York in May, June, July, and August; New Jersey in May; Washington, D. C., in August; Nebraska in May.

A type is in the British Museum.

C. postera Gn.*

1852. Gn., Spec. Gen., Noct., II, 133, *Cucullia.*
1857. Wlk., C. B. Mus., Het., XI, 656, *Cucullia.*
1874. Lintner, Ent. Contr., III, 169, *Cucullia.*

HABITAT.—New Hampshire, July; New York, July; New Jersey.

The type is in the British Museum.

The distribution is probably coincident with that of *asteroides.*

C. florea Gn.*

1852. Gn., Spec. Gen., Noct., II, 133, *Cucullia.*
1857. Wlk., C. B. Mus., Het., XI, 656, *Cucullia.*
1874. Lintner, Ent. Cont., III, 169, *Cucullia.*

HABITAT.—With *postera* and at same dates.

The type is in the British Museum.

C. lætifica Lint.*

1875. Lintner, in Grote's Check List Noct., 24, *Cucullia.*
1878. Lintner, Ent. Cont., IV, 98, *Cucullia.*

cita Grt.
1883. Grt., Papilio, III, 75, *Cucullia*.
1892. Smith, Proc. U. S. Nat. Mus., XV, 44, pr. syn.
hartmanni French
1888. French, Can. Ent., XX, 69, *Cucullia*.
1892. Smith, Proc. U. S. Nat. Mus., XV, 44, pr. syn.

HABITAT.—Arizona; Texas in April.

Dr. Lintner's types are in the National Museum and in his own collection; the type of *cita* is in the Neumœgen collection, while that of *hartmanni* is with Prof. French.

C. speyeri Lint.*

1874. Lintner, Ent. Cont., III, 168, figs. 13 and 14, *Cucullia*.

HABITAT.—Canada to Pennsylvania; west to Nebraska; New York, June and August; Nebraska in May.

Types are in Dr. Lintner's collection.

C. dorsalis Smith.*

1892. Smith, Proc. U. S. Nat. Mus., XV, 46, *Cucullia*.

HABITAT.—Colorado, Denver in June, Glenwood Springs in September.

The type is in the National Museum.

C. bistriga Smith.*

1892. Smith, Proc. U. S. Nat. Mus., XV, 47, *Cucullia*.

HABITAT.—Colorado.

Types are in the Neumœgen collection and in the National Museum.

C. intermedia Speyer.*

1870. Speyer, Stett. Ent. Zeit., XXXI, 400, *Cucullia*.
1872. Lintner, Ent. Cont., I, 81, 85, pl. VIII, figs. 5, 7, *Cucullia*.
1874. Lintner, Ent. Cont., III. 170. *Cucullia*.
1875. Speyer, Stett. Ent. Zeit., XXXVI, 155, *Cucullia*.
1878. Lintner, Ent. Cont., IV, 125, *Cucullia*.
umbratica ‡ Gn.
1852. Gn., Spec. Gen., Noct., II, 147, *Cucullia*.
1870. Speyer, Stett. Ent. Zeit., XXXI, 400, pr. syn.

HABITAT.—Canada to Virginia; Central States; New York in May, July, and August; Delaware in August.

I have not seen the type.

C. cinderella Smith.*

1892. Smith, Proc. U. S. Nat. Mus., XV, 48, *Cucullia*.

HABITAT.—Colorado, Glenwood Springs in September.

The type is in the National Museum.

C. serraticornis Lint.*

1874. Lintner, Ent. Cont., III, 174, *Cucullia*.
1875. Lintner, in Grote's Check List Noct., pl., fig. 10, *Cucullia*.

1883. Grt., Proc. Am. Phil. Soc., XXI, 161, *Cucullia.*
matricaria Behr.
1874. Behr, in Strk., Lep. Rhop. et Het., 94, *Cucullia.*
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 218, pr. syn.

HABITAT.—California.

The type is in Dr. Lintner's collection.

C. solidaginis Behr.

1874. Behr, in Strk. Lep. Rhop. et Het., 94, *Cucullia.*
1892. Smith, Proc. U. S. Nat. Mus., XV, 51, *Cucullia.*

HABITAT.—California.

I have not seen the type and have not been able to identify the species satisfactorily.

Genus EUTELIA Hbn.

1816. Hbn., Verzeichniss, 259.

E. pulcherrima Grt.

1865. Grt., Proc. Ent. Soc. Phil., IV, 326, *Ripogenus.*
1882. Grt., Can. Ent., XIV, 183, *Ripogenus.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 161, *Ripogenus.*
dentifera Wlk.
1865. Wlk., C. B. Mus., Het., XXXIII, 818, *Eutelia.*

HABITAT.—New York; New Jersey.

The types are in the British Museum, and refer to the same species. Both names were published in 1865, but I think Mr. Grote's name antedates the other somewhat. At all events it is the most meritorious. Mr. Neumœgen also has "type" specimens.

Genus MARASMALUS Grt.

1872. Grt., Trans. Am. Ent. Soc., IV, 89.

M. inficita Wlk.*

1865. Wlk., C. B. Mus., Het., XXXIII, 818, *Eutelia.*
histrio Grt.
1872. Grt., Trans. Am. Ent. Soc., IV, 297, *Marasmalus.*

HABITAT.—Canada to Texas; west to Nebraska; Colorado. June and July; Kansas in July.

Both types are in the British Museum and refer to the same species. This time Mr. Walker has the clear priority.

M. ventilator Grt.*

1872. Grt., Trans. Am. Ent. Soc., IV, 89, *Marasmalus.*
1879. Grt., Can. Ent., XI, 179, *Marasmalus.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 162, *Marsamalus.*

HABITAT.—With the preceding, June and July.

The type is in the British Museum. This is the larger and brighter of the two species.

Genus **INGURA** Gn.

1852. Gn., Spec. Gen., Noct., II, 309.

I. declinata Grt.*

1879. Grt., Can. Ent., XI, 208, *Ingura.*

HABITAT.—California in August; Colorado.

The type is in the British Museum.

I. delineata Gn.*

1852. Gn., Spec. Gen., Noct., II, 311, *Ingura.*
1857. Wlk., C. B. Mus., Het., XII, 857, *Ingura.*

HABITAT.—Canada to Alabama, to Illinois; Missouri; Massachusetts in July.

The species is described after a drawing by Abbott, which I have not seen. I think there is little doubt of the correctness of the identification which Mr. Grote has made in American collections.

I. abrostoloides Gn.*

1852. Gn., Spec. Gen., Noct., II, 311, *Ingura.*
1857. Wlk., C. B. Mus., Het., XII, 875, *Ingura.*
producta Wlk.
1855. Wlk., C. B. Mus., Het., V, 1031, *Edema.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 29, ? var. *declinata.*
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 311, ? pr. syn.

HABITAT.—With the preceding, but more rare. July.

I have not seen Guenée's type, which is with Mr. Oberthür. Walker's type is in the British Museum and is the species Mr. Grote has—I think correctly—identified as *abrostoloides.*

I. fuscescens Wlk.*

1855. Wlk., C. B. Mus., Het., V, 1031, *Edema.*
1868. G. & R., Trans. Am. Ent. Soc., II, 73, *Ingura.*
abrostella Wlk.
1866. Wlk., C. B. Mus., Het., XXXV, 1744, ? *Subrita.*
præpilata Grt.
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 311, *Ingura.*

HABITAT.—Texas in April and May; Mississippi; New Mexico.

All the types are in the British Museum. Mr. Grote's type is of the Belfrage material, and exact duplicates from the same collector are in the National Museum. Mr. Neumœgen has also a "type" of Mr. Grote's species. Walker's *abrostella* was described as a Crambit.

I. flabella Grt.

1879. Grt., Can. Ent., XI, 208, *Ingura.*

HABITAT.—Kansas.

The type is in the British Museum.

I. oculatrix Gn.*

1852. Gn., Spec. Gen., Noct., II, 313, *Ingura.*
1857. Wlk., C. B. Mus., Het., XII, 875, *Ingura.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 162, *Ingura.*

HABITAT.—Eastern, middle, and central States; Canada; New York in July.

The species was described from the Saunders collection and the type is probably at Oxford. I think there is no doubt of the correctness of the identification made by Mr. Grote.

I. pygmæa Hbn.

1818. Hbn., Zuträge, 21, ff. 109, 110, *Paectes.*
1880. Grt., Can. Ent., XII, 87, *Ingura.*

HABITAT.—Georgia.

This species is not yet identified in our collections so far as I know. I have not tried to compare the figure carefully.

I. cristatrix Gn.

1852. Gn., Spec. Gen., Noct., II, 313, *Ingura.*
1857. Wlk., C. B. Mus., Het., XII, 875, *Ingura.*

HABITAT.—America?

Guenée describes his species as from the Coll. Cie des Indes and suggests that it may be East Indian. But he makes the same suggestion also as to *oculatrix* and it does not mean much positive knowledge. I have not tried seriously to recognize the species.

Genus ANOMIS Hbn.

1816. Hbn., Verzeichniss, 249.

A. erosa Hbn.*

1818. Hbn., Zuträge, 19, ff. 287, 288, *Anomis.*
1816. Hbn., Verzeichniss, 249, *Anomis.*
1852. Gn., Spec. Gen., Noct., II, 395, *Cosmophila.*
1880. Grt., Can. Ent., XII, 116, *Anomis.*
1882. Riley, Rept. Ent. Dept. Agl., 1881–'82, 167, pl. 8, f. 1, *Anomis.*
1885. Riley, 4th Rept. U. S. Ent. Comm., 315, pl. II, ff. 1, 2, 3, *Anomis.*

HABITAT.—Massachusetts, in August; District of Columbia and southward; Kansas in September.

Full life histories of this species can be found in the two reports by Dr. Riley, where all stages are acceptably figured. By the dates given it is evident that either the Verzeichniss was not published until 1818, or the names to be given were anticipated in that publication.

A. exacta Hbn.*

1810. Hbn., Saml. Ex. Schmett., II, pl. 411, *Anomis.*
1816. Hbn., Verzeichniss, 249, *Anomis.*
1852. Gn., Spec. Gen., Noct., II, 399, *Anomis.*
1857. Wlk., C. B. Mus., Het., XIII, 989, *Anomis.*
1868. H. Sch., Corr. Blatt, 1868, Cuba, p. 16, *Anomis.*
1885. Riley, 4th Rept. Ent. Comm., 350, *Anomis.*

HABITAT.—Southern United States.?

Dr. Riley questions Mr. Grote's identification of this species, and calls our American form *texana*. He is probably correct in this; but as I have not studied the question, I give the bibliography necessary to put the student on the track.

A. texana Riley.*

1885. Riley, 4th Rept. Ent. Comm., 350, app. 120, pl. ii, ff. 4, 5, and 6, *Anomis*.

HABITAT.—Texas; Southern United States.

Dr. Riley proposes this name to replace *exacta* Grt., not Hübner. The figure given is excellent, and leaves no doubt as to the species intended. The types are in the National Museum.

A. luridula Gn.*

1852. Gn., Spec. Gen., Noct., II, 401, *Anomis*.
1857. Wlk., C. B. Mus., Het., XIII, 988, *Anomis*.
1868. H-Sch., Corr. Blatt, 1868, Cuba, 16. *Anomis*.
1883. Gundlach, Cont. Ent. Cub., 324, *Anomis*.
1892. Butler, Entomologist, XXV, 12, *Anomis*.
derogata Wlk.
1857. Wlk., C. B. Mus., Het., XIII, 990, *Anomis*.
1892. Butler, Entomologist, XXV, 13, pr. syn.

HABITAT.—Gulf States; West Indies; Venezuela.

Luridula Gn., and *derogata* Wlk., based on typical specimens in the British Museum, are one species. There is not even the varietal difference between them that Mr. Butler seems to suspect, unless very slight difference in maculation makes a variety. Under that definition almost every specimen would be a variety, so I can not quite understand what Mr. Butler's remark (*l. c.*, p. 13) was intended to mean.

A. conducta Wlk.*

1857. Wlk., C. B. Mus., Het., XIII, 990, *Anomis*.
1892. Butler, Entomologist, XXV, 13, *Anomis*, =**illita**.
hostia Harv.
1876. Harv., Can. Ent., VIII, 6, *Aletia*.
1892. Butler, Entomologist, XXV, 13, pr. syn.

HABITAT.—Texas.

The types are in the British Museum. The species is much more common in Central and South America, and probably only occasional in the Southern United States. Mr. Butler would see in this the true *Aletia argillacea* of Hübner, and so cites it in the Entomologist, *l. c. supra*. I do not follow Mr. Butler's references to *illita* Gn., because I believe that to be another species. One of the types is in the Jardin des plantes in Paris, while none is in the British Museum. I did not directly compare the specimens, but Guenée's species looked different. I do know that the synonymy above is correct as far as it goes.

Genus **ALETIA** Hbn.

1816. Hbn., Verzeichniss, 239.

A. argillacea Hbn.*

1820. Hbn., Zutraege, ff. 399, 400, *Aletia.*
1856. Wlk., C. B. Mus., Het., IX, 79, *Mythimna.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 122, 170, *Aletia.*
1879. Comstock, Cotton Insects, I, 284, pl. 1, *Aletia.*
1880. Grt., Can. Ent., XII, 117, *Aletia.*
1892. Butler, Entomologist, XXV, 13, *Aletia.*
xylina Say.
1828. Say, Southern Agriculturist, I, 203, *Noctua.*
1859. Say, American Ent., Lec. ed., I, 370, *Noctua.*
1864. Grt., Proc. Ent. Soc. Phil., III, 541, *Anomis.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 170, pr. syn.
1880. Grt., Can. Ent., XII, 117, pr. syn.
1881. Riley, Papilio, I, 107, an sp. dist.
1885. Riley, 4th Rept. Ent. Comm., pp. 1–341, pl., *Aletia.*
grandipuncta Gn.
1852. Gn., Spec. Gen., Noct., II, 400, *Anomis.*
1857. Wlk., C. B. Mus., Het., XIII, 989, *Anomis.*
1868. Bethune, Can. Ent., I, 87, *Anomis.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 24, pr. syn.
bipunctina Gn.
1852. Gn., Spec. Gen., Noct., II, 400, *Anomis.*
1857. Wlk., C. B. Mus., Het., XIII, 980, *Anomis.*
1864. Grt., Proc. Ent. Soc. Phil., III, 541, = *xylina.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 170, pr. syn.

HABITAT: Canada occasional, south to Central Southern and Gulf States; Central and South America.

I have seen none of the types. *Bipunctina* was described from a figure by Abbot and has no type; *grandipuncta* was described from specimens in the Saunders & Guenée collections. The types are, therefore, probably one of them at Oxford, the others at Rennes with M. Oberthür. The bibliography given is a mere outline. In Comstock's Cotton Report of 1879 and in the 4th Rept. of the United States Entomological Commission a full bibliography covering several pages is given. In these publications all possible information concerning the species will be found. Concerning the synonymy adopted, a few words may be necessary. Prof. Comstock accepted Mr. Grote's dictum on authority, while suggesting that it was not beyond doubt. Dr. Riley does not accept Mr. Grote's identification at all, and goes at some length into the reasons for declining to do so. Unfortunately, with a large material at command, he yet failed to find a species to which he was willing to apply Hübner's figure positively. Mr. Butler says, "I can not admit this identification of *argillacea*," referring to its union with *xylina* Say. He refers to *argillacea*, *illita* Gn., *conducta* Wlk., and *hostia* Harv. *Hostia* and *conducta* are synonymous from my own examination of the types. Of *illita* I am not certain; but I feel very firmly convinced that Hübner did not have this form before him to be figured, Some four or five years ago I examined, at Dr. Riley's request, a very large series of Anomids, largely South American, in comparison with a number of type specimens from the Paris collections and with the descriptions of all the species. The material was larger than any I have seen elsewhere or since, and after the most careful comparisons I then concluded that Hübner could have had no other than Say's *xylina* before him as original to his figure. There are certain specific characters that are seen in *xylina* and in no other species, and these characters are given by Hübner. The figure is bad and the color is bad; but neither are worse than a hundred others which are accepted unquestioned, and the specific features given are those of *xylina* and of no other species. The very great majority of early figures are no more accurate than is Hübner's *argillacea*, but where there are not closely related species the matter is immaterial. In this instance I believe Mr. Grote most clearly in the right.

Genus **PTERÆTHOLIX** Grt.

1873. Grt., Trans. Am. Ent. Soc., IV, 298.

P. bullula Grt.*

1873. Grt., Trans. Am. Ent. Soc., IV, 299, *Pteræthоlix.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 163, *Pteræthоlix.*

HABITAT.—Alabama and Southern States; Texas in October to December.

The specimen in the British Museum does not seem to be the type; but is from the Grote collection and is the same as the specimens so named in the National Museum. Mr. Butler says, Entomologist XXV, 11, that this is the same genus as *Berresa* Wlk., Het. XVI, 214. I did not see the specimens and am not ready to accept the reference.

Genus **AMYNA** Gn.

1852. Gn., Spec. Gen., Noct., I, 406.

A. orbica Morr.*

1874. Morr., Proc. Bost. Soc. N. H., XVII, 216, *Segetia.*
tecta Grt.
1876. Grt., Can. Ent., VIII, 190, *Chytoryza.*
1878. Grt., Can. Ent., X, 233, *Chytoryza.*
1891. Smith, List Lepidoptera, 51, pr. syn.

HABITAT.—Texas; Kansas in October.

Somewhere I have seen Mr. Morrison's type, which is the same species as Mr. Grote's type of *tecta* in the British Museum. It is quite likely that Mr. Morrison's name must eventually sink in favor of one of the Guenèe or Walker names In the British and other European museums are a number of Central and South American species, very closely allied, which much resemble our own insect. In fact there were so many names and so little difference in the specimens that I felt unwilling to identify the Texan form with any of them. *Ilattia* is another generic synonym.

Genus **LITOPROSOPUS** Grt.

1869. Grt., Trans. Am. Ent. Soc. II, 309.

L. futilis G. & R.*

1868. G. & R., Trans. Am. Ent. Soc., II, 202, pl. iii, f. 73, *Dyops*.
1869. Grt., Trans. Am. Ent. Soc., II, 309, *Litoprosopus*.
1881. Grt., Bull. Geol. Surv., VI, 271, *Litoprosopus*.
1883. Grt., Proc. Am. Phil. Soc., XXI, 163, *Litoprosopus*.

HABITAT.—Florida; Georgia.

I have not seen the type, nor do I know where it is.

L. confligens Wlk.

1857. Wlk., C. B. Mus., Het., XII, 856, *Dyops*.
1869. Grt., Trans. Am. Ent. Soc., II, 309, *Litoprosopus*.

HABITAT.—West Indies; Central and South America.

The type is in the British Museum. I have seen no specimens from our fauna, nor do I find any record of such. I follow Mr. Grote in listing it, without a knowledge of why he did so. He also lists *hatuey* Poey, but this is explained by him and the species is not claimed from fauna.

Genus **DIASTEMA** Gn.

1852. Gn., Spec. Gen., Noct., II, 317.

D. tigris Gn.

1852. Gn., Spec. Gen., Noct., II, 317, *Diastema*.
1857. Wlk., C. B. Mus., Het., XII, 879, *Diastema*.
1892. Butler, Entomologist, XXV, 11, *Nipista*.
lineata Wlk.
1857. Wlk., C. B. Mus., Het., XII, 800, *Nipista*.
1892. Butler, Entomologist, XXV, 11, pr. syn.

HABITAT.—Florida.

Both types are in the British Museum, and Mr. Butler is correct in uniting them. He thinks *tigris* not congeneric with *Diastema virgo* and therefore adopts Walker's generic name. My ideas of genera do not always agree with Mr. Butler's, and I prefer therefore to retain Guenée's genus until I can make comparisons myself.

Genus **OGDOCONTA** Butler.

1891. Butler, Ann. & Mag. Nat. Hist., 1891, 462.

O. cinereola Gn.*

1852. Gn., Spec. Gen., Noct., II, 316, pl. 15, f. 1, *Placodes*.
1853. H. Sch., Lepid. Exot., 68, f. 215, *Placodes*.
1856. H. Sch., Schmett. Eur., Index, *Telesilla*.
1857. Wlk., C. B. Mus., Het., XII, 878, *Placodes*.
1874. Grt., Can. Ent., VI, 16, *Telesilla*.
1880. Coquillett, No. Amer. Ent., I, 52, larva.
1891. Butler, Ann. and Mag. Nat. Hist., 1891, 462, *Ogdoconta*.
atomaria Wlk.
1865. Wlk., C. B. Mus., Het., XXXII, 675, *Miana*.
1882. Grt., Ill. Essay, 44, pr. syn.

HABITAT.—Canada to Texas to Minnesota; Nebraska. Canada in

June; New York, June, July, August; Illinois, August and September; Texas in April; Delaware in June.

The types are in the British Museum. Mr. Butler's characters for the genus seem good. *Navia* Harvey, belongs to *Stibadium*.

O. carneola Smith.

1891. Smith, Trans. Am. Ent. Soc.. XVIII, 110, *Telesilla*.
1891. Smith, List Lepidoptera, 51, *Ogdoconta*.

HABITAT.—Las Vegas, New Mexico.

The type is in the Neumœgen collection.

Genus **BEHRENSIA** Grt.

1875. Grt., Can. Ent., VII, 70.

B. conchiformis Grt.

1875. Grt., Can. Ent., VII, 71, *Behrensia*.
1875. Grt., List Noctuidæ, pl., f. 6, *Behrensia*.
1883. Grt., Proc. Am. Phil. Soc., XXI, 164, *Behrensia*.

HABITAT.—California; Portland, Oregon, April and May.

The type is in the British Museum. The species is one I had never seen before and is one of the most beautiful of our noctuids. I have since seen several specimens, all taken at light, and all of them in such poor condition that the brilliancy of the species could not be appreciated.

Genus **ABROSTOLA** Ochs.

1816. Ochs., Schmett. Eur., IV, 88.

A. ovalis Gn.

1852. Gn., Spec. Gen , Noct., II, 322, *Abrostola*.
1857. Wlk., C. B. Mus., Het., XII, 883, *Abrostola*.

HABITAT.—Canada in August; New York; New Jersey; Pennsylvania; Massachusetts in June and August.

The type is in the British Museum.

A. urentis Gn.*

1852. Gn., Spec. Gen., Noct., II, 322, pl. 11, f. 11, *Abrostola*.
1857. Wlk., C. B. Mus., Het., XII, 883, *Abrostola*.
1875. Speyer, Stett. Ent. Zeit., XXXVI, 159, *Abrostola*.

HABITAT.—Nova Scotia, southward to District of Columbia; Middle and Central States, July and August.

The type is in the British Museum.

Genus **DEVA** Wlk.

1857. Wlk., C. B. Mus., Het., XII, 962.

D. purpurigera Wlk.*

1858. Wlk., C. B. Mus., Het., XIV, 1791, *Deva*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 30, *Plusia*.
1881. Grt., Papilio, I, 35, *Deva*.

HABITAT.—Canada; New York; Colorado; New Mexico; Eastern and Northern States, June, July, August.

The type is in the British Museum.

D. palligera Grt.

1881. Grt., Papilio, I, 35, *Dera*.

HABITAT.—Sierra Nevada, California; Western Colorado.

Types are in the Edwards Collection and in the British Museum.

D. morigera Hy. Edw.

1887. Hy. Edw., Ento. Amer., II, 169, *Deva*.

HABITAT.—South Park, Colorado.

The type is in the Edwards Collection.

Genus **PLUSIA** Ochs.

1816. Ochs., Schmett. Eur., IV, 89.

Mr. Grote in his lists writes *Plusia* Fabricius, and in 1874 quoted Lederer as authority for this use. Lederer, however, says *Plusia* Treitschke; but says also *Plusia* Fabricius, for a section of the genus including those not referable to *Abrostola*; Staudinger writes *Plusia* Ochsenheimer, and this accords with what I have found in my searches among the ancients. In none of the Fabrician works is *Noctua* subdivided, though probably in the Systema Glossatorum this was done. It may be that Lederer derives his authority from this unpublished work; but as the matter stands Ochsenheimer must be credited with the genus.

P. ærea Hbn.*

1810. Hbn., Schmett. Eur., IV, pl. 56. f. 27, *Noctua*.
1811. Oliv., Enc. Meth., VIII. 318, *Noctua*.
1816. Hbn., Verzeichniss, 250, *Agrapha*.
1827. Dup., Hist. Nat. Lep. Fr., VII, 17, pl. 133, f. 4, *Noctua*.
1829. Bdv., Index Meth., 159, *Plusia*.
1832. Meigen, Syst. Beschr. Schmett. Eur., III, 250, pl. 121, f. 5, *Plusia*.
1852. Gn., Spec. Gen., Noct., II, 333, *Plusia*.
1857. Wlk., C. B. Mus., Het., XII. 890, *Plusia*.

HABITAT.—Nova Scotia, south to Florida and Texas; United States east of the Rocky mountains; New Mexico; Colorado; Canada in June and August; New York in June, August, and September; Massachusetts in July; District of Columbia in August.

This species was described as European, which accounts for the character of the bibliography. Guenée first pointed out that it was an American. Curiously enough there has been no reference requiring citation in American works.

P. æroides Grt.*

1864. Grt., Proc. Ent. Soc. Phil., III, 83, et 541, pl. 2, f. 5, *Plusia*.
1874. Lintner, Ent. Cont., III, 164, larva.
1876. Thaxter, Psyche, I, 188, larva.

HABITAT.—Canada to Texas, to Colorado. Dates as in *ærea*.

The type is in the British Museum.

P. balluca Geyer.*

1835. Geyer, Zuträge, ff. 681, 682, *Dyachrysia.*
1852. Gn., Spec. Gen., Noct., II, 334, *Plusia.*
1857. Wlk., C. B. Mus., Het., XII, 904, *Plusia.*
1873. Saund., Can. Ent., V, 11, larva.
1874. Lintner, Ent. Cont., III, 163, larva.
1881. Grt., Can. Ent., XIII, 91, *Plusia.*

HABITAT.—Nova Scotia; Canada in June and July; Northern, Eastern and Middle States in July and August.

P. metallica Grt.*

1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 311, *Plusia.*
bractea ‡ Grt.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 72, *Plusia.*
1875. Grt., Can. Ent., VII, 46, *Plusia.*
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 311, pr. syn.

HABITAT.—California, Mendocino in June.

The type is in the British Museum.

P. arizona French.

1889. French, Can. Ent., XXI, 161, *Plusia.*

HABITAT.—Arizona.

The type is in Prof. French's collection. If it is as close an ally of *P. howardi* Edw., as Prof. French suggests, it is not a *Plusia* at all, but a *Basilodes.* I have not seen it.

P. contexta Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 193, *Plusia.*
1875. Speyer, Stett. Ent. Zeit., XXXVI, 161, *Plusia.*
1883. Thaxter, Papilio, III, 18, larva on grass.

HABITAT.—Maine; New York; Eastern and Middle States, June, July, August. A type is in the British Museum; another in Dr. Lintner's collection.

P. putnami Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 146 et. 192, pl. 4, f. 2, *Plusia.*
1875. Speyer, Stett. Ent. Zeit., XXXVI, 162, *Plusia.*

HABITAT.—Northern, Eastern, and Middle States; Canada; June and July; Colorado; Virginia; Portland, Oregon, May and June.

The type is in the British Museum.

P. venusta Wlk.

1865. Wlk., C. B. Mus., Het., XXXIII, 836, *Plusia.*
striatella Grt.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 194, *Plusia.*

HABITAT.—Canada; Maine; New York; District of Columbia.

The type of Walker's species is in the British Museum, as is also a specimen of *striatella*—not the type—from the Grote collection. The two refer to the same species.

P. formosa Grt.*

1865. Grt., Proc. Ent. Soc. Phil., IV, 323, *Leptina*.
1875. Morr., Ann. Lyc. Nat. Hist. N. Y., XI, 98, *Plusia*.

HABITAT.—Maine; Massachusetts in July; New York; New Jersey.

I have not seen the type. Mr. Grote mentions incidentally in the Can. Ent., XXI, 124, that he returned it to Mr. Treat after description. What became of it afterward, I can not say. The species is well known, however, though rare, and can not be mistaken.

P. thyatiroides Gn.*

1852. Gn., Spec. Gen., Noct., II, 337, pl. 11, f. 8, *Plusia*.
1857. Wlk., C. B. Mus., Het., XII, 905, *Plusia*.

HABITAT.—New York, August and September; Canada; Northern, Central, and Middle States.

The type is in the British Museum.

P. mappa G. & R.*

1868. G. & R., Trans. Am. Ent. Soc., II, 204, *Plusia*.
1869. Bethune, Can. Ent., I, 87, *Plusia*.

HABITAT.— Canada in July and August; Northern States; Mount Washington.

I have not seen the type, nor do I know where it is.

P. bimaculata Steph.*

1832. Steph., Ill. Brit. Ent., Haust., III, 104, *Plusia*.
1857. Wlk., C. B. Mus., Het., XII, 905, *Plusia*.
u-brevis Gn.
1852. Gn., Spec. Gen., Noct., II, 341, *Plusia*.
1857. Wlk., C. B. Mus., Het., XII, 905, ? pr. syn.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 30, pr. syn.
1874. Grt., Can. Ent., VI, 72, pr. syn.
protea Cram.
1782. Cram., Pap. Ex., IV, 244, pl. 400, f. M, *Noctua*.
1857. Wlk., C. B. Mus., Het., XII, 905, ? pr. syn.

HABITAT.—Canada in July and August, to Middle States; New York; New Jersey.

The type of Guenée's species is in the British Museum. The reference to Cramer's species may or may not be correct. I have not examined the matter myself, and simply give the Walker citation. Of course Cramer's name would have priority did it apply to our species.

P. biloba Steph.*

1832. Steph., Ill. Brit. Ent., Haust., III, 104, *Plusia*.
1852. Gn., Spec. Gen., Noct., II, 341, pl. 11, f. 10, *Plusia*.
1857. Wlk., C. B. Mus., Het., XII, 906, *Plusia*.
1882. French, Papilio, II, 113, life history.

HABITAT.—Massachusetts to Florida, west through the Mississippi States; Texas; Colorado in September; California in April; New York in June and July.

P. verruca Fabr.*

1794. Fabr., Ent. Syst., III, 2, 81, *Noctua.*
1811. Oliv., Encyc. Meth., VIII, 315, *Noctua.*
1852. Gn., Spec. Gen., Noct., II, 342, *Plusia.*
1857. Wlk., C. B. Mus., Het., XII, 906, *Plusia.*
omega Hbn.
1820. Hbn., Zutræge, 29, f. 373, 374, *Argyrogramma.*
1852. Gn., Spec. Gen., Noct., II, 342, pr. syn.
1857. Wlk., C. B. Mus., Het., XII, 906, pr. syn.
oo. Cram.
1782. Cram., Pap. Exot., IV, 45, pl. 311, f. *E*, not *F.*, *Noctua.*
1852. Gn., Spec. Gen., Noct., II, 342, pr. syn.
1856. Wlk., C. B. Mus., Het., XII, 906, ? pr. syn.
omicron Hbn.
1816. Hbn., Verzeichniss, 251, *Autographa.*
1857. Wlk., C. B. Mus., Het., XII, 906, pr. syn.
questionis Tr.
1835. Tr., Schmett. Eur., Supplt., 132, *Plusia.*
1840. Bdv., Gen. et Ind. Meth., 158, *Plusia.*
1852. Gn., Spec. Gen., Noct., II, 342, pr. syn.
1857. Wlk., C. B. Mus., Het., XII, 906, pr. syn.

HABITAT.—New York to Florida, Texas, Central and South America; Massachusetts in August; New Jersey in May; Texas in November; Kansas.

The synonymy above is that given by Guenée and after him by Walker. The latter questions *oo* Cramer, as the same, but Guenée seems to consider that Cramer had two species under that name, and cites figure *E* only to this form. Walker makes this the *omicron* of Hübner, nec Linnaeus.

P. rogationis Gn.*

1852. Gn., Spec. Gen., Noct., II, 344, *Plusia.*
1857. Wlk., C. B. Mus., Het., XII, 906, *Plusia.*
hamifera Wlk.
1857. Wlk., C. B. Mus., Het., XII, 917, *Plusia.*
dyaus Grt.
1875. Grt., Can. Ent., VII, 202, *Plusia.*

HABITAT.—New York to Texas; Colorado; South America.

In the British Museum are types of *hamifera* and *dyaus*, and these are unquestionably alike. There are also specimens of *dyaus* under *precationis* Wlk.; but there are no specimens of *rogationis* under the label. In the Berliner Museum, however, is a series of South American specimens marked *rogationis* Gn., and among them is a specimen from Boll, Texas, exactly like *dyaus.* Guenée mentions his species as from divers collections, not rare, and gives "Am. Sept." as one of the localities. His comparative description applies perfectly, and though I have not seen absolute types, I make no doubt the Berlin specimens are correctly named and that *dyaus* Grt., is the same species. *Hamifera* is recorded from Brazil and Venezuela, covering thus the localities given by Guenée.

P. culta Lint.

1885. Lintner, 2nd Rept. Ins. New York. 91. *Plusia.*
1891. Smith, List Lepidoptera, 52, =*laticlavia.*

HABITAT.—New York.

The type is in Dr. Lintner's collection.

I was in error in referring this species to *laticlavia* Morrison in the Check list.

P. precationis Gn.*

1852. Gn., Spec. Gen., Noct., II, 344, *Plusia.*
1857. Wlk., C. B. Mus., Het., XII, 907, *Plusia.*
1869. Pack., Guide to Study of Insects, 312, larva.
1882. Coquillett, Can. Ent., XIV, 60, larva.

HABITAT.—Canada; United States east of the Rocky Mountains. May to October.

The type is in the British Museum, where there are three species mixed under this name. The description of the larva cited by Mr. Edwards in his catalogue of early stages applies to *simplex.*

P. egena Gn.

1852. Gn., Spec. Gen., Noct., II, 328, *Plusia.*
1883. Grt., Can. Ent., XV, 26, *Plusia.*

HABITAT.—Indian River, Florida.

The species is described from Brazil. I have not seen the type.

P. labrosa Grt.

1874. Grt., Proc. Ac. Nat. Sci. Phil., 1874, 207, *Plusia.*

HABITAT.—California in August.

The type is in the British Museum.

P. flagellum Wlk.

1857. Wlk., C. B. Mus., Het., XII, 909, *Plusia.*
monodon, Grt.
1875. Grt., Can. Ent., VII, 202, *Plusia.*

HABITAT.—Hudson Bay Territory. Cape Breton; "North America."

The types are in the British Museum and refer to the same species.

P. pseudogamma Grt.

1875. Grt., Can. Ent., VII, 203, *Plusia.*

HABITAT.—Cape Breton.

The type is in the British Museum.

P. gamma Linn.

1761. Linn., Fauna Suec., 1171, *Noctua.*
1767. Linn., Syst. Nat., ed. XII, 2, 843, *Noctua.*
1781. Fabr., Spec. Insect., II, 227, *Noctua.*
1787. Fabr., Mant. Ins., II, 162, *Noctua.*
1793. Fabr., Ent. Syst., III, 2, 79, *Noctua.*
1811. Oliv., Encycl. Meth., VIII, 313, *Noctua.*

1816. Hbn., Verzeichniss, 251, *Autographa.*
1823. Tr., Schmett. Eur., v, 185, *Plusia.*
1837. Kirby, Fn. Bor. Amer., IV, 307, *Plusia.*
1852. Gn., Spec. Gen., Noct., II, 348, *Plusia.*
1857. Wlk., C. B. Mus., Het., XII, 899, *Plusia.*
1874. Strk., Lep. Rhop. et Het., 94, *Plusia.*
1874. Grt., Can. Ent., VI, 16, *Plusia.*
1875. Speyer, Stett. Ent. Zeit., XXXVI, 164, *Plusia.*
1881. Beth., Can. Ent., XIII, 162, *Plusia.*

HABITAT.—Hudson's Bay Territory; Canada; California.

This species is omitted from Mr. Grote's list of 1891, and from my own as well. I believed that the northern type was *pseudogamma* and the western, *californica.* I am not certain now that such is not the case; but as I have not had an opportunity of comparing types I give the species a place pending further study.

P. ou Gn.*

1852. Gn., Spec. Gen., Noct., II, 348, *Plusia.*
1857. Wlk., C. B. Mus., Het., XII, 907, *Plusia.*
1874. Morr., Proc. Bost. Soc. N. H., XVII, 219, *Plusia.*
var. **californica** Spey.*
1875. Speyer, Stett. Ent. Zeit., XXXVI, 164, *Plusia gamma* var.
1886. Hy. Edw., Ento. Amer., II, 170, *Plusia.*
var. **russea** Hy. Edw.
1886. Hy. Edw., Ento. Amer., II, 170, var. prec.

HABITAT.—New York; Missouri; Nebraska; Florida; Texas March, May, and November; California, March, April, and August; Colorado in September; Oregon, April, May, and June.

Guenée's type is in the British Museum and the specimens from the Grote collection are like it. *Californica* Speyer is a slight variety of *ou*, and not of *gamma*, as Speyer thought. The California localities for *gamma* are probably based on this species. Dr. Strecker states very positively that his California examples are *gamma*. Mr. Edwards's variety is scarcely worthy a name.

P. fratella Grt.

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 161, *Plusia.*
1875. Morr., Proc. Bost. Soc. N. H., 1875, 219, = *P. ou.*

HABITAT.—Texas.

The type is in the British Museum. As already stated, Mr. Grote had correctly identified *ou*, and Mr. Morrison's reference of *fratella* is, therefore, incorrect.

P. pedalis Grt.

1875. Grt., Can. Ent., VII, 204, *Plusia.*

HABITAT.—Kansas.

The type is in the British Museum.

P. brassicæ Riley.*

1870. Riley, 2d Rept. Ins. Mo., 110, f. 81, *Plusia*.
1871. Beth., Rept. Ent. Soc. Ont., 1871, 51, f. 93, *Plusia*.
1871. Pack., in Hayden's 9th Rept. Geol. Surv., 752, *f.* a, b, c.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 147, =*ni*.
1875. Speyer, Stett. Ent. Zeit., XXXVI, 165, 350, *Plusia*.
1880. Riley, Amer. Ent., III, 200, *Plusia*.
1881. Riley, Index and Supplt., to Mo. Repts., 77, sp. dist.
1881. Riley, Papilio, I, 106, *Plusia*.
1881. Grt., Papilio, I, 127, =*ni*.
1881. Butler, Papilio, I, 170, =*u-aureum*.
1882. Riley, Papilio, II, 13, sp. dist.
1883. Riley, Rept. U. S. Dept. Agl., 1883, 119, pl. I et XI, life hist.
1886. Grt., Can. Ent., XVIII, 232, = *ni*.
ni ‡ Grt.
1873. Grt., Bull. Buff. Soc., Nat. Sci., I, 147, *Plusia*.
1880. Lintner, in Colvin's 7th Rept. Surv. Adir., 399, *Plusia*.
echinocystis Behr.
1874. Behr, in Strk. Lepidopt., 91, *Plusia*.

HABITAT.—United States generally; Canada. Throughout the season.

Dr. Riley's types are in the National Museum. I have not compared the European and American species and give the above as the present status of the literature. Mr. Butler's reference to *u-aureum* Gn., is wild. In the Berliner Museum there is a specimen labeled *echinocystis* Behr, received from Boll, Texas. I am inclined to believe the labeling authentic, and the very brief description is not contradictory in any way. It has been referred, doubtfully, to *pasiphæa*; but this does not agree with what little is said. The economic bibliography is large.

P. oxygramma Geyer.*

1830. Geyer, Zutræge, f. 769, 770, *Autographa*.
1852. Gn., Spec. Gen., Noct., II, 353, *Plusia*.
1857. Wlk., C. B. Mus., Het., XII, 908, *Plusia*.

HABITAT.—Missouri; Georgia; Southern States; Texas.

P. scapularis Hy. Edw.

1882. Hy. Edw., Papilio, II, 127, *Plusia*.

HABITAT.—Washington.

Types are in the Edwards and Neumœgen collections.

P. lenzi French.

1889. French, Can. Ent., XXI, 161, *Plusia*.

HABITAT.—Siskiyou, California.

I have not seen this species. I believe Prof. French has the type.

The species is nominally credited to Dr. Behr. MSS.; but the description is by French, and he must be credited with the species, since he, not Dr. Behr, characterized it.

P. u-aureum Gn.*

1852. Gn. Spec. Gen.. Noct., II, 354, *Plusia.*
1860. Moeschl., Wien. Ent. Monatschr., IV, 371, *Plusia.*
1881. Butler, Papilio, I, 170, *Plusia.*
interrogationis var. *grœnlandica* Stgr.
1857. Stgr., Stett. Ent. Zeit., XXVIII, 306, *Plusia.*
1860. Moeschl., Wien. Ent. Monatschr., IV, 371, pr. syn.

HABITAT.—Labrador; Greenland; Canada in September; Adirondack Mountains in July.

I have seen no types. The species is credited to "Boisduval in Mus.," but was first described by Guenée. The types are probably with M. Oberthür.

P. mortuorum Gn.*

1852. Gn., Spec. Gen., Noct., II, 353, *Plusia.*
1857. Wlk., C. B. Mus., Het., XII, 910, *Plusia.*

HABITAT.—Canada; Northern and Eastern States; New York and New Jersey, July and August.

The type is in the British Museum.

P. octo-scripta Grt.*

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 72, *Plusia.*
1874. Grt., Can. Ent., VI, 72 (*8-signata*).

HABITAT.—Anticosti; Canada in September; Maine; Vermont; Massachusetts in September; New York; Wisconsin.

I have seen no type. I can not find that Sanborn ever described this species, and therefore credit it to Mr. Grote, who did so.

P. falcigera Kirby.

1837. Kirby, Fn. Bor. Amer., IV, 308, *Plusia.*
1857. Wlk., C. B. Mus., Het., XII. 908, *Plusia.*
1881. Beth., Can. Ent., XIII, 463, *Plusia.*
rectangula Kirby.
1837. Kirby, Fn. Bor. Amer., IV, 306, *Plusia.*
1857. Wlk., C. B. Mus., Het., XII, 908, ? pr. syn.
1881. Beth., Can. Ent., XII, 162, *Plusia.*

HABITAT.—Hudson Bay Territory; Nova Scotia; Canada.

The above synonymy is after Walker, and may or may not be correct. Dr. Bethune writes *falcifera* while Walker has it *falcigera*. I have not seen the original description and am not sure which is correct. Mr. Grote, however, also writes *falcigera*, and he has, perhaps, compared the original work. The specimens in the British Museum labeled *falcigera* by Walker are *vaccinii* Hy. Edw., and do not accord well with the description copied by Dr. Bethune. It is, however, quite likely that the species belongs here.

P. vaccinii Hy. Edw.*

1886. Hy. Edw., Ento. Amer., II, 170, *Plusia.*

HABITAT.—Mt. Washington, N. H.; New York, Adirondack Mountains; Nova Scotia.

The type is with Dr. Thaxter, who pointed out the species to me in the National Museum, where it stood in the Meske collection as *octoscripta*. It much resembles that species. As already stated, this is the *falcigera* of Walker, and possibly that of Kirby as well; but there is sufficient doubt in the matter to prevent their union here.

P. selecta Wlk.*

1857. Wlk., C. B. Mus., Het., XII, 912, *Plusia*.
viridisignata Grt.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 73 (*viridisigma*).
1875. Grt., Bull. Buff. Soc. Nat. Sci., III, 5, *Plusia*.
1875. Grt., Can. Ent., VII, 205, *Plusia*.

HABITAT.—Hudson Bay Territory; Canada in August; Adirondack Mountains, New York; Denver, Colorado.

The types are in the British Museum, and refer to the same species.

P. angulidens Smith.*

1891. Smith, Trans. Am. Ent. Soc., XVIII, 111, *Plusia*.

HABITAT.—South Park, Colorado.

Types are in the National Museum, the Neumœgen collection, and in the Rutgers College collection.

P. celsa Hy. Edw.

1881. Hy. Edw., Papilio, I, 101, *Plusia*.

HABITAT.—Oregon.

The type is in the Neumœgen collection.

P. epigæa Grt.*

1874. Grt., Proc. Ac. Nat. Sci., Phil., 1874, 208, *Plusia*.

HABITAT.—New York in July; Massachusetts in July; Colorado.

The type is in the British Museum.

P. surena Grt.

1882. Grt., Bull. Geol. Surv., VI, 585, *Plusia*.

HABITAT.—Orono, Maine.

The type is in Mrs. Fernald's collection.

P. basigera Wlk.*

1865. Wlk., C. B. Mus., Het., XXXIII, 836, *Plusia*.
laticlavia Morr.
1875. Morr., Ann. Lyc. Nat. Hist., N. Y., XI, 98, *Plusia*.

HABITAT.—New York; New Jersey in October; Florida.

Walker's type is in the British Museum, from "North America." Mr. Morrison's type is in the Tepper collection; the two are identical. I have unfortunately referred Dr. Lintner's *culta* to *laticlavia*, with which it has little in common.

P. ampla Wlk.*

1857. Wlk., C. B. Mus., Het., XII, 910, *Plusia*.

HABITAT.—Hudson Bay Territory; Canada; Northern and Eastern States, July and August.

The type is in the British Museum.

P. simplex Gn.*

1852. Gn., Spec. Gen., Noct., II, 346, *Plusia*.
1857. Wlk., C. B. Mus., Het., XII, 907. *Plusia*.
1877. Grt., Bull. Geol. Surv., III, 119, *Plusia*.
1881. Coquillett, Can, Ent., XIII, 21—larva sub nom. *precationis*.
1882. Coquillett, Can. Ent., XIV, 16, larva.

HABITAT.—Hudson Bay Territory; Canada; United States east of the Rocky Mountains, throughout the season; Colorado, 12,000 feet; New Mexico.

The type is in the British Museum.

P. pasiphæia Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 146, pl. IV, f. 1, *Plusia*.

HABITAT.—California in October.

The type is in the British Museum. Mr. Grote has cited, with a query, *P. echinocystis* Behr, to this species. The description of Dr. Behr's species tells nothing; but I have given under *brassicæ* my reasons for citing it there.

P. diasema Bdv.

1829. Bdv., Eur. Lep., Ind. Meth., 93, *Plusia*.
1852. Gn., Spec. Gen., Noct., II, 355, *Plusia*.
1857. Wlk., C. B. Mus., Het., XII, 962, *Plusia*.
1857. Staud., Stett. Ent. Zeit., 1857, 305, *Plusia*.

HABITAT.—Labrador; Lapland; Colorado.

The type is probably with M. Oberthür, at Rennes. Mr. Grote has always written *diasema* Dalman; but I have not been able to ascertain why. I still followed Mr. Grote in my list, but make the change here because I can not trace the species otherwise.

P. parilis Hbn.

1800. Hbn., Schmett. Eur., Noct., III, 422, *Noctua*.
1816. Hbn., Verzeichniss, 251, *Autographa*.
1829. Bdv., Ind. Meth., 159, *Plusia*.
1852. Gn., Spec. Gen., Noct., II, 355, *Plusia*.
1857. Wlk., C. B. Mus., Het., XII, 903, *Plusia*.
1860. Moeschl., Wien. Ent. Monatschr., IV, 371, *Plusia*.
quadriplaga Wlk.
1857. Wlk., C. B. Mus., Het., XII, 911, *Plusia*.

HABITAT.—Fraw Island, Arctic North America; Labrador; Lapland.

Walker's type is in the British Museum, and is the *parilis* of the Grote, Mœschler, and other collections. Walker cites Cramer's figure of *Phalæna iota* (Ex. II, 106, pl. 165, fig. *C*.) to his species, suggesting that it did not represent the Linnæan species. *Iota*, by the bye, is recorded as American by Kirby; but probably erroneously. So also *mya* Hbn. is made Canadian by Walker. It is a matter of some interest perhaps to ascertain what these authors had before them; but the names need not be repeated here to cumber the list.

P. sackeni Grt.

1877. Grt., Can. Ent., IX, 135, *Plusia*.
1878. Grt., Bull. Geol. Surv., III, 801, *Plusia*.

HABITAT.—Colorado.

The type is in the British Museum.

P. snowi Hy. Edw.*

1884. Hy. Edw., Papilio, IV, 44, *Plusia*.

HABITAT.—New Mexico; Colorado, South Park.

The type is in Prof. Snow's collection.

P. accurata Hy. Edw.

1882. Hy. Edw., Papilio, II, 127, *Plusia*.

HABITAT.—Washington.

Mr. Neumœgen has the type. It is probably not a *Plusia* at all.

P. alterna Strk.

1885. Strk., Proc. Ac. Nat. Sci. Phil., XXXVII, 178, *Plusia*.

HABITAT.—Colorado.

The type is in the Strecker collection.

P. corrusca Strk.

1885. Strk., Proc. Ac. Nat. Sci. Phil., XXXVII, 178, *Plusia*.

HABITAT.—Colorado.

The type is in the Strecker collection. I do not know this or the preceding species, and the proper placing it is impossible from the description.

P. omicron Linn.

1823. Afzelius, Life of Linnæus, *Phalæna*.
1816. Hbn., Verzeichniss, 251, *Autographa*.
1826. Afzelius, Life of Linnæus, Berlin (trans.), 137, *Phalæna*.
1857. Wlk., C. B. Mus., Het., XII, 906, ? = *verruca*.
1874. Grt., Proc. Ac. Nat. Sci. Phil., 1874, 208, ? = *simplex*.

HABITAT.—North America (? New York.)

It is perhaps questionable whether this species can ever be identified with certainty. This, however, is a question for a future monographer of the genus and not for the catalogue maker.

P. indigna Wlk.

1857. Wlk., C. B. Mus., Het., XII, 909, *Plusia*.

HABITAT.—"Georgia."

The type is in the British Museum. It is a small species, not in the

Grote collection, and which I had never before seen. It has a peculiarly elongate, narrow, silver-margined spot, extending to the t. p. line at the sinus. It seems really more southern in type. The specimen is without locality, bought in the Milne collection, and is quite as likely to be Australian as American.

Genus **CALOPLUSIA** Smith.

1884. Smith, Bull. Bkln. Ent. Soc., VII, 63.

C. alticola Wlk.*

1857. Wlk., C. B. Mus., Het., XII, 912, *Plusia.*
1874. Pack., Rept. Geol. Surv., 1874, 554, =*hochenwarthi.*
1875. Morr., Ann. Lyc. Nat. Hist., N. Y., XI, 99, =*hochenwarthi.*
ignea Grt.
1863. Grt., Proc. Ent. Soc. Phil., II, 274, *Plusia.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 31, pr. syn.
1874. Pack., Rept. Geol. Surv., 1874, 554, pr. syn.
1875. Morr., Ann. Lyc. Nat. Hist., N. Y., XI, 99, pr. syn.

HABITAT.—Rocky Mountains; Pike's Peak; Colorado.

The type of *alticola* is probably in the British Museum. I have no type mark to the name in my notes, and cannot now remember whether the specimens seen were not from the Grote collection. The type of *ignea* should be in the collection of the American Entomological Society; but I have not been able to find it there.

C. hochenwarthi Hochenw.*

1785. Hochenw., Act. Soc. Berol., VI, 337, pl. 7, f. 2, *Phalæna.*
1786. Esp., Eur. Schmett., IV, pl. 179, f. 3, *Noctua.*
1811. Oliv., Enc. Meth., VIII, 314, =*divergens.*
1852. Gn., Spec. Gen., Noct., II, 356, =*divergens.*
1857. Wlk., C. B. Mus., Het., XII, 904, = *divergens.*
1860. Moeschl., Wien. Ent. Monatschr., IV, 370, *Plusia.*
1874. Pack., Rept. Geol. Surv., 1874, 545, 554, *Plusia.*
1875. Morr., Ann. Lyc. Nat. Hist. N. Y., XI, 99, *Plusia.*
divergens Fabr.
1787. Fabr., Mant. Ins., II, 162, *Noctua.*
1793. Fabr., Ent. Syst., III, 2, 80, *Noctua.*
1811. Oliv., Enc. Meth., VIII, 314, *Noctua.*
1816. Hbn., Verzeichniss, 250, *Syngrapha.*
1823. Treit., Schmett. Eur., V, 194, *Plusia.*
1852. Gn., Spec. Gen., Noct., II, 355, *Plusia.*
1857. Wlk., C. B. Mus., Het., XII, 904, *Plusia.*
1871. Staud., Cat. Lep. Eur., 127, pr. syn.
1874. Pack., Rept. Geol. Surv., 1874, 554, pr. syn.

HABITAT.—Labrador; White Mountains; Colorado, South Park, Hall Valley, in August.

I have not given all the European bibliography. It is possible that Hübner's term *Syngrapha* may supersede *Caloplusia*; but I can not now compare the Verzeichniss to ascertain the type of the genus. It differs from *Plusia* in the narrow, ovate eyes, the spinose tibiæ, and anartiform habitus.

C. devergens Hbn.*

1800. Hbn., Schmett. Eur., Noct., 500, 501, *Noctua.*
1816. Hbn., Verzeichniss, 250, *Syngrapha.*
1823. Treit., Schmett. Eur., v, 197, *Plusia.*
1852. Gn., Spec. Gen., Noct., II, 356, *Plusia.*
1857. Wlk., C. B. Mus., Het., XII, 903, *Plusia.*

HABITAT.—Colorado; Labrador.

Genus **LEPIPOLYS** Gn.

1852. Gn., Spec. Gen., Noct., II, 173.

L. perscripta Gn.

1852. Gn., Spec. Gen., Noct., II, 174, pl. vii f. 10, *Lepipolys.*
1857. Wlk., C. B. Mus., Het., XI, 677, *Lepipolys.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 147, *Lepipolys.*

HABITAT.—Massachusetts; Florida; Texas; Colorado; California, in May.

The type is in the British Museum. The species is well marked and easily recognizable.

Genus **CALPE** Tr.

1825. Tr., Schmett. Eur., v, 2, 168.

C. canadensis Beth.*

1865. Bethune, Proc. Ent. Soc. Phil., IV, 213, *Calpe.*
1868. Bethune, Can. Ent., I, 71, *Calpe.*
1875. Speyer, Stett. Ent. Zeit., XXXVI, 166, 350, *Calpe.*
1878. Thaxt., Psyche, II, 123, larva.
1880. Coquillett, Can. Ent., XII, 44, larva.
purpurascens Wlk.
1865. Wlk., C. B. Mus., Het., XXXIII, 842, *Plusiodonta.*
1868. G. & R., Trans. Am. Ent. Soc., II, 87, pr. syn.
1868. Bethune, Can. Ent., I, 71, pr. syn.
sobria Wlk.
1865. Wlk., C. B. Mus., Het., XXXIII, 846, *Oræsia.*
1868. G. & R., Trans. Am. Ent. Soc., II, 87, per syn.

HABITAT.—Canada; New York, in August and September; New Jersey; Massachusetts in July; New Hampshire in September.

Walker's types are in the British Museum. Dr. Bethune's type is probably in his own collection.

Genus **GONODONTA** Hbn.

1816. Hübner, Verzeichniss, 263.

G. unica Neum.

1891. Neum., Can. Ent., XXIII, 125, *Gonodonta.*

HABITAT.—Indian River, Florida.

Types are in the Neumœgen and Palm collections.

Genus **PLUSIODONTA** Gn.

1852. Gn., Spec. Gen., Noct., II, 359.

P. compressipalpis Gn.*

1852. Gn., Spec. Gen., Noct., II, 359, pl. 12, f. 2, *Plusiodonta.*
1857. Wlk., C. B. Mus., Het., XII, 938, *Plusiodonta.*
insignis Wlk.
1865. Wlk., C. B. Mus., Het., XXXIII, 842, *? Plusiodonta.*

HABITAT.—Canada to Georgia, to Texas; east of the Rocky Mountains, June, July, September.

The types are in the British Museum. It is one of the mysteries how Walker, with Guenée's type and figure before him, could rename so prominent a species.

Genus **HYPSOROPHA** Hbn.

1816. Hbn., Verzeichniss, 249.

H. monilis Fabr.*

1781. Fabr., Spec. Ins., II, 219, *Noctua.*
1787. Fabr., Mant. Ins., II, 147, *Noctua.*
1793. Fabr., Ent. Syst., III, 2, 46, *Noctua.*
1811. Oliv., Encycl. Meth., VIII, 281, *Noctua.*
1816. Hbn., Verzeichniss, 249, *Hypsoropha.*
1818. Hbn., Zutraege, f. 23 and 24, *Hypsoropha.*
1857. Wlk., C. B. Mus., Het., XIII, 994, *Hypsoropha.*
1880. Grt., Can. Ent., XII, 85, *Hypsoropha.*

HABITAT.—Southern States; west to Kansas. Missouri in June.

H. hormos Hbn.

1818. Hbn., Zutraege, 10, ff. 27, 28, *Hypsoropha.*
1816. Hbn., Verzeichniss, 249, *Hypsoropha horma.*
1852. Gn., Spec. Gen., Noct., II, 403, *Monogona.*
1857. Wlk., C. B. Mus., Het., XIII, 995, *Tiauspa.*
1880. Grt., Can. Ent. XII, 85, *Hypsoropha.*

HABITAT.—New York to Texas; Central States. District of Columbia in August.

Genus **HEMICERAS** Gn.

1852. Gn., Spec. Gen., Noct., II, 379.

H. cadmia Gn.

1852. Gn., Spec. Gen., Noct., II, 383, pl. 13 f. 2, *Hemiceras.*
1857. Wlk., C. B. Mus., Het., XIII, 970, *Hemiceras.*
obliquilinea Wlk.
1862. Wlk., C. B. Mus., Het., XXVI, 1695, *Comidara.*

HABITAT.—Middle and Southern States.

Walker's type is in the British Museum, while that of M. Guenée is at Rennes with M. Oberthür. Walker's species was described as a geometrid, from Venezuela.

Genus **CIRRHOPHANUS** Grt.

1872. Grt., Can. Ent., IV, 187.

C. triangulifer Grt.*

1872. Grt., Can. Ent., IV, 187, *Cirrhophanus.*
1875. Grt., Proc. Ac. Nat. Sci. Phil., 1875, 421, fig., *Cirrhophanus.*
1882. Grt., Ill. Essay, 60, pl. 3 f. 26, *Chariclea.*
1882. Grt., Can. Ent., XIV, 183, *Cirrhophanus.*
1883. Riley, Amer. Naturalist, XVII, 788, fig., *Cirrhophanus.*
1883. Grt., Can. Ent., XV, 76, *Cirrhophanus.*
pretiosa Morr.
1875. Morr., Proc. Bost. Soc. N. H., XVIII, 122, *Chariclea.*
1875. Grt., Check List Noctuidæ, 12, pr. syn.
1882. Grt., Ill. Essay, 60, pr. syn.

HABITAT.—Middle and Central States to Kansas.

The original type specimen is in the National Museum from the Riley collection. Mr. Morrison's type I have not seen.

C. duplicatus Smith.*

1891. Smith, Trans. Am. Ent. Soc., XVIII, 112, *Cirrhophanus.*

HABITAT.—Platte Cañon, Colorado, 6,500 feet.

The type is in the National Museum.

Genus **BASILODES** Gn.

1852. Gn., Spec. Gen., Noct., II, 358.

B. pepita Gn.*

1852. Gn., Spec. Gen., Noct., II, 358, pl. 12 f. 1, *Basilodes.*
1857. Wlk., C. B. Mus., Het., XII, 936, *Basilodes.*
1883. Grt., Can. Ent., XV, 73, *Basilodes.*

HABITAT.—Virginia to Florida, to Colorado.

The type is with M. Oberthür at Rennes.

B. chrysopis Grt.*

1881. Grt., Papilio, I, 154, *Basilodes.*

HABITAT.—Arizona; Colorado; New Mexico.

The type is with Mr. Neumœgen.

B. territans Hy. Edw.*

1884. Hy. Edw., Papilio, IV, 45, *Basilodes.*

HABITAT.—Arizona.

The type is with Mr. Neumœgen.

B. howardi Hy. Edw.*

1877. Hy. Edw., Pacific Coast, Lep., 25, p. 1, *Plusia.*
1884. Hy. Edw., Papilio, IV, 45, *Basilodes.*

HABITAT.—Arizona.

The type is in the Edwards collection.

B. mirabilis Neum.

1884. Neum., Papilio, IV, 94, *Basilodes*.

HABITAT.—Southwestern Arizona.

The type is in the Neumœgen collection.

Genus **STIRIA** Grt.

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 73.

S. rugifrons Grt.*

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 73, *Stiria*.
1882. Grt., Can. Ent., XIV, 76, *Stiria*.
1883. Grt. Can. Ent., XV, 74, *Stiria*.

HABITAT.—Kansas; Colorado, Denver in June.

The type is in the British Museum.

S. sulphurea Neum.

1882. Neum., Papilio, II, 135, *Stiria*.

HABITAT.—Arizona.

The type is in Mr. Neumœgen's collection.

S. nanata Neum.

1884. Neum., Papilio, IV, 95, *Stiria*.

HABITAT.—New Mexico.

The type is with Mr. Neumœgen.

Genus **STIBADIUM** Grt.

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 74.

S. spumosum Grt.*

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 74, *Stibadium*.
1882. Grt., Can. Ent., XIV, 76, *Stibadium*.
1883. Grt., Can. Ent., XV, 74, *Stibadium*.

HABITAT.—New York to Kansas; Illinois; Colorado in August; Nebraska in August.

The type is in the British Museum.

S. aureolum Hy. Edw.*

1882. Hy. Edw., Papilio, II, 126, *Stibadium*.

HABITAT.—Arizona.

The types are in the Neumœgen and Edwards collections.

S. curiosum Neum.

1883. Neum., Papilio, III, 141, *Stibadium*.

HABITAT.—Arizona.

Types are in the Neumœgen collection.

S. navium Harv.*

1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 10, *Telesilla navia.*
1883. Grt., Can. Ent., XV, 131, *Telesilla.*
1891. Smith, Trans. Am. Ent. Soc., XVIII, 111, *Stibadium.*

HABITAT.—Texas in May.

The type is in the British Museum, and is like the specimens I have seen so named. The type shows, distinctly enough, all the structural characters of the present genus, and only the superficial habitus of *Telesilla.*

Genus PLAGIOMIMICUS Grt.

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 182.

The relation of the three preceding to the present genus can not be considered as settled. In the Bull. Bkln. Ent. Soc., V, 30, I had united them all as *Basilodes*, which is perhaps too radical a procedure. As new species have been and will be added, the relations will become more clear. Some of the species of *Plusia* will find a place here I think, and perhaps some other species elsewhere referred at present.

P. pitychromus Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 182, *Plagiomimicus.*
1882. Grt., Can. Ent., XIV, 75, 182, *Plagiomimicus.*
1882. Grt., Papilio, II, 183, *Plagiomimicus.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 172, *Plagiomimicus.*
media Morr.
1875. Morr., Proc. Bost. Soc. N. H., XVIII, 123, *Schinia.*
1880. Grt., Can. Ent., XII, 185, pr. syn.

HABITAT.—New York in August; Middle, Southern, and Central States; Colorado; Nebraska; Texas in August.

Grote's type is in the British Museum. Mr. Morrison's specimen I have not seen.

P. triplagiatus Smith.*

1890. Smith, Ento. Amer., VI, 139, *Plagiomimicus.*

HABITAT.—Las Vegas, New Mexico, 7,000 feet, August.

Types are in the Neumœgen collection and in the Rutgers College (Hulst) collection.

P. tepperi Morr.*

1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 68, *Schinia.*
1875. Morr., Proc. Bost. Soc. N. H., XVIII, 124, *Polenta.*
1880. Grt., Bull. Bkln. Ent. Soc., III, 38, *Plagiomimicus.*
1882. Grt., Can. Ent., XIV, 75, *Plagiomimicus.*
1882. Grt., Papilio, II, 185, *Plagiomimicus.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 172, *Plagiomimicus.*
richii Grt.
1886. Grt., Can. Ent., XVIII, 99, *Plagiomimicus.*
1891. Smith, List Lepidoptera, 53, pr. syn.

HABITAT.—Texas, in March; Colorado in August.

Mr. Morrison's types are in the Tepper and Neumœgen collections; Mr. Grote's is in the British Museum. I am, at least in great part, responsible for Mr. Grote's synonym, by insisting, correctly enough, that Mr. Morrison's type in the Tepper collection had unarmed fore tibiæ as described. Many specimens examined since, prove that this was a defect in the type and not characteristic of the species.

P. expallidus Grt.*

1882. Grt., Papilio, II, 185, *Plagiomimicus.*

HABITAT.—Montana; Colorado, Platte Cañon in August.

Types are in the National Museum and in the Neumœgen collection.

P. viridifera Grt.

1882. Grt., Can. Ent., XIV, 217, *Zotheca.*
1891. Smith, List Lepidoptera, 53, *Plagiomimicus.*

HABITAT.—Arizona.

The type is in Mr. Neumœgen's collection. The species has a curious color resemblance to the species of *Zotheca;* but in head and feet structures the reference here is justified.

Genus **FALA** Grt.

1875. Grt. Proc. Ac. Nat. Sci. Phil., 1875, 425.

F. ptycophora Grt.*

1875. Grt., Proc. Ac. Nat. Sci. Phil., 1875, 426, *Fala.*
1882. Grt., Ill. Essay, 64, pl. 3, f. 36, *Fala.*
1883. Grt., Can. Ent., XV, 74, *Fala.*

HABITAT.—California.

The type is in the British Museum. It is a curious mottled species, with heavy body and primaries, in which the costa is depressed and the apices are distinct. A specimen in the National Museum had long puzzled me as to its location, as I could not make it function satisfactorily with Mr. Grote's descriptions.

Genus **ACOPA** Harv.

1874. Harv., Bull. Buff. Soc. Nat. Sci., II, 279.

A. carina Harv.*

1874. Harv., Bull. Buff. Soc. Nat. Sci., II, 279, *Acopa.*
1878. Grt., Can. Ent., X, 67, *Acopa.*
1883. Grt., Can. Ent., XV, 77, *Acopa.*

HABITAT.—Texas, in October.

The type is in the British Museum.

A. perpallida Grt.

1878. Grt., Can. Ent., X, 68, *Acopa.*

HABITAT.—Kansas.

The type is in the British Museum.

A. incana Hy. Edw.

1882. Hy. Edw., Papilio, II, 128, *Acopa.*

HABITAT.—Arizona.

The type is in Mr. Neumœgen's collection.

A. pacifica Hy. Edw.

1884. Hy. Edw., Papilio, IV, 16, *Acopa.*

HABITAT.—Arizona.

The type is said to be in the Neumœgen collection.

Genus **NEUMŒGENIA** Grt.

1882. Grt., Papilio, II, 132.

N. poetica Grt.

1882. Grt., Papilio, II, 132, 184, *Neumœgenia.*

HABITAT.—Arizona; Oregon.

The type is in the Neumœgen collection.

Genus **ANTAPLAGA** Grt.

1877. Grt., Can. Ent., IX, 71.

A. dimidiata Grt.*

1877. Grt., Can. Ent., IX, 71, *Antaplaga.*
1882. Grt., Can. Ent., XIV, 74, *Antaplaga.*
1882. Smith, Trans. Am. Ent. Soc., X, 217, *Antaplaga*

HABITAT.—Colorado.

The type is in the British Museum.

With this genus begins that series treated by me ten years ago in vol. x, of the Transactions of the American Entomological Society under the title, "Synopsis of the North American Heliothinæ." This was my first monographic paper, and somewhat crude. It has proved itself accurate enough as to facts, but somewhat too radical in some of its conclusions. Larger material has modified my views as to the standing of some species, and I have made some changes of sequence. As a whole, however, I have retained the results of that work, adding largely to the bibliography.

A. sexseriata Grt.

1881. Grt., Papilio, I, 176, *Grotella.*
1882. Grt., Ill. Essay, 61, pl. 3, f. 29, *Grotella.*
1882. Smith, Trans. Am. Ent. Soc., X, 217, *Antaplaga.*

HABITAT.—Arizona.

The types are in the British Museum and in the Neumœgen collection.

A. biundulata Zell.

1872. Zell., Verh. k. k. zoöl. bot. Ges., 1872, 502, pl. III, f. 14, *Sedenia biundulalis.*
1891. Smith, Trans. Am. Ent. Soc., XVIII, 120, *Antaplaga.*

HABITAT.—Texas.

There are specimens of this species, probably named by Zeller himself, in the Berliner Museum, agreeing with the specimens upon which my note was based. Like it, they came from Boll, Texas, and were placed among the Noctuidæ.

A. composita Hy. Edw.

1884. Hy. Edw., Papilio, IV, 44, *Eulithosia.*
1891. Smith, List Lepidoptera, 53, *Antaplaga.*

HABITAT.—Arizona.

The type is with Mr. Neumœgen.

A. thoracica Hy. Edw.

1884. Hy. Edw., Papilio, IV, 44, *Eulithosia.*
1891. Smith, List Lepidoptera, 53, *Antaplaga.*

HABITAT.—Arizona.

The type is with Mr. Neumœgen. The two last-named species were made types of a new Lithosiid genus by Mr. Edwards, who allowed a certain false habitus to deceive him. The frontal and tibial structure is characteristic of the present genus.

Genus **GROTELLA** Harv.

1874. Harv., Bull. Buff. Soc. Nat. Sci., II, 278.

G. septempunctata Harv.*

1874. Harv., Bull. Buff. Soc. Nat. Sci., II, 278, *Grotella.*
1882. Smith, Trans. Am. Ent. Soc., x, 218, *Grotella.*

HABITAT.—Texas, in August and October; Colorado.

The type is in the British Museum.

G. dis Grt.*

1883. Grt., Ann. and Mag. N. H., 1883, 55, *Grotella.*
1883. Grt., Trans. Kans. Ac. Sci., VIII, 55, *Grotella.*

HABITAT.—New Mexico; Arizona.

The types are with Mr. Neumœgen and in the National Museum.

Genus **PIPPONA** Harv.

1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 9.

P. bimatris Harv.*

1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 10, *Pippona.*
1882. Grt., Can. Ent., XIV, 75, *Pippona.*
1882. Smith, Trans. Am. Ent. Soc., x, 216, *Pippona.*

HABITAT.—Texas, in October.

The type is in the British Museum.

Genus **BESSULA** Grt.

1881. Grt., Papilio, I, 176.

B. luxa Grt.

1881. Grt., Papilio, I, 176, *Bessula.*
1882. Grt., Can. Ent., XIV, 74, *Bessula.*
1882. Smith, Trans. Am. Ent. Soc., x, 218, *Bessula.*

HABITAT.—New Mexico; Colorado.

The type is in the British Museum. It is an easily recognized form, much like *Pippona* in outline, which I had not before seen.

Genus **OXYCNEMIS** Grt.

1882. Grt., Can. Ent. XIV, 182.

O. advena Grt.

1882. Grt., Can. Ent., XIV, 182, *Oxycnemis.*
1882. Grt., Proc. Am. Phil. Soc., XXI, 165, 175. *Oxycnemis.*

HABITAT.—Arizona.

The type is in the Neumœgen collection.

Genus **NYCTEROPHÆTA** Smith.

1882. Smith, Bull. Bkln. Ent. Soc., IV, 45.

N. luna Morr.*

1875. Morr., Proc. Bost. Soc. N. H., XVIII, 122, *Cucullia.*
1891. Smith, List Lepidoptera, 53, *Nycterophæta.*
magdalena Hulst.
1882. Hulst, Bull. Bkln. Ent. Soc., IV, 45, *Nycterophœta.*
1891. Smith, List Lepidoptera, 53, pr. syn.
notatella Grt.
1882. Grt., Can. Ent., XIV, 75, *Epinyctis.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 161,=*magdalena.*

HABITAT.—Dakota; Wyoming; Black Hills; Montana; Colorado, Denver in June.

Mr. Morrison's type is, I believe, in the Strecker collection. Mr. Hulst's is in the Rutgers College collection, while Mr. Grote described from the Neumœgen collection.

Genus **COPABLEPHARON** Harv.

1878. Harv., Can. Ent., X, 56.

C. absidum Harv.*

1874. Harv., Bull. Buff. Soc. Nat. Sci., II, 275, *Ablepharon.*
1876. Harv., Can. Ent., VIII, 35, *Arsilonche.*
1878. Harv., Can. Ent., X, 56, *Copablepharon.*
grandis Strk.
1875. Strk., Lep. Rhop. et Het., 129, *Aedophron.*
1879. Grt., Can. Ent., XI, 29, pr. syn.

HABITAT.—California in July; Oregon; Colorado; Montana.

Dr. Harvey's type is in the Edwards collection. That of *grandis* is probably in the Strecker collection.

C. subflavidens Grt.*

1882. Grt., Can. Ent., XIV, 169, *Copablepharon.*

HABITAT.—Montana.

The type is with Mr. Neumœgen.

C. longipenne Grt.

1882. Grt., Can. Ent. XIV, 169, *Copablepharon.*

HABITAT.—Montana.

The type is with Mr. Neumœgen.

C. album Harv.*

1876. Harv., Can. Ent., VIII, 35, *Arsilonche.*
1882. Grt., Can. Ent., XIV, 169, *Copablepharon.*

HABITAT.—Oregon; Colorado; Montana.

The type is in the Edwards collection.

Genus **AEDOPHRON** Led.

1857. Lederer, Noct. Europ., 180.

A. pallens Tepper.

1882. Tepper, Trans. Am. Ent. Soc., X, 215, *Aedophron.*

HABITAT.—Southern California.

The type is in the Tepper collection.

Genus **THYREION** Smith.

1891. Smith, Trans. Am. Ent. Soc., XVIII, 121.

T. snowi Grt.

1875. Grt., Proc. Ac. Nat. Sci., Phil., 1875, 422, *Aedophron.*
1876. Grt., Stett. Ent. Zeit., XXXVII, 137, *Aedophron.*
1882. Grt., Ill. Essay, 65, pl. III, f. 37, *Aedophron.*
1882. Smith, Trans. Am. Ent. Soc., X, 216, ? *Aedophron.*
1891. Smith, Trans. Am. Ent. Soc., XVIII, 121, *Thyreion.*

HABITAT.—Kansas.

A specimen (? the type) is in the British Museum and agrees generically with the following species:

T. rosea Smith.

1891. Smith, Trans. Am. Ent. Soc., XVIII, 121, *Thyreion.*

HABITAT.—South Park, Colorado.

The type is with Mr. Neumœgen.

Genus **CHLORIDEA** Westw.

1841. Westw., in Jardine, N. H. Libr., XXXVII, 198.

I use this generic term instead of uniting the two species with *Heliothis*, because, though very closely allied, they can be separated and an overloading of the genus prevented. The only apparent difference is in the wing form, their proportion to the body, and in the pattern of maculation.

C. virescens Fabr.*

1781. Fabr., Spec. Ins., II, 217, *Noctua.*
1787. Fabr., Mant. Ins., II, 141, *Noctua.*
1793. Fabr., Ent. Syst., III, 2, 30, *Noctua*—larva.
1811. Oliv., Enc. Meth., VIII, 269, *Noctua.*
1841. Westw., in Jardine N. H. Libr., 37, 199, pl. 24, f. 3, *Chloridea.*
1852. Gn., Spec. Gen., Noct., II, 175, *Aspila.*
1857. Wlk., C. B. Mus., Het., XI, 678, *Chloridea.*
1868. H. Sch., Corr. Blatt, Cuba, p. 10, *Chloridea.*
1880. Riley, Am. Ent., III, 7, larva.

1885. Gundlach, Cont. Ent. Cub., 310, *Aspila.*
1885. Riley, 4th Rept. Ent. Comm., 351, pl. LXII, 4, *Aspila.*
rhexia S. & A.
1792. S. & A., Ins. Ga., II, 199, pl. 100, *Phalæna.*
1852. Gn., Spec. Gen., Noct., II, 175, *Aspila.*
1857. Wlk., C. B. Mus., Het., XI, 696, *Chloridea.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 33, *Chloridea.*
1882. Smith, Trans. Am. Ent. Soc., X, 220, *Chloridea.*
1885. Gundlach, Cont. Ent. Cub., 310, pr. syn.
1885. Riley, 4th Rept. Ent. Comm., 351, pr. syn.
spectanda Strk.
1875. Strk., Lep. Rhop. et Het., 122, *Heliothis.*
1879. Grt., Can. Ent., XI, 29, pr. syn.

HABITAT.—Canada in October; Middle, Southern, and Central States west to Colorado; Kansas in August; California in September and October.

Gundlach makes it *rhexia* ♂, *virescens* ♀, while Riley unites the two on the study of long series of material. I have no doubt they are correct, though Guenée points out what seem to him good characters and gives the Fabrician species a South American habitat only.

C. subflexa Gn.

1852. Gn., Spec. Gen., Noct., II, 175, *Aspila.*
1857. Wlk., C. B. Mus., Het., XI, 678, *Chloridea.*
1882. Smith, Trans. Am. Ent. Soc., X, 250, *Aspila.*

HABITAT.—North America.

The type is probably with M. Oberthür at Rennes. I am not aware that the species has been identified in American collections and I have seen nothing quite agreeing with the description.

Genus HELIOCHEILUS Grt.

1865. Grt., Proc. Ent. Soc. Phil., IV, 328.

H. paradoxus Grt.*

1865. Grt., Proc. Ent. Soc. Phil., IV, 329, pl. III, f. 4 and 6, *Heliocheilus.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 123, *Heliocheilus.*
1882. Smith, Trans. Am. Ent. Soc., X, 220, *Heliothis.*

HABITAT.—Southern and Central States; Texas, in March; Colorado.

I have not seen the type, which should be in the Philadelphia collection.

H. albidentina Wlk.

1865. Wlk., C. B. Mus., Het., XXXII, 680, *Perigea.*
1890. Butler, Entomologist, XXIV, 265,=*Anthæcia inflata.*

HABITAT.—Florida.

The type is in the British Museum. Compared with *paradoxus*, it is darker throughout, the markings more obvious, s. t. space blackish, with the t. p. line white, denticulate in one specimen only. Anterior tibia with one inner and one outer spine or claw. A curious form, apparently distinct from the South American species. The foregoing is my note on the species. Since then I have received Mr. Butler's notes in which he makes the species equal *A. inflata* Wallengren, Wien. Ent. Monatschr., 1860, IV, 172, from Honolulu, and suggests that *paradoxus* may be only a paler form. Mr. Butler may be right in his reference, but the species seemed to me distinct, though near allies. Under the circumstances I prefer to hold both species as above, for the present.

Genus **HELIOTHIS** Ochs.

1816. Ochs., Schmett. Eur., IV, 91.

H. armiger Hbn.*

1810. Hbn., Samml. Eur. Schmett., Noct., 370, *Noctua.*
1816. Ochs., Schmett. Eur., IV, 91, *Heliothis.*
1852. Gn., Spec. Gen., Noct., II, 181, *Heliothis.*
1857. Wlk., C. B. Mus., Het., XI, 684, *Heliothis.*
1868. H. Sch., Corr. Blatt, 1868, Cuba, p. 10, *Heliothis.*
1875. Speyer, Stett. Ent. Zeit., XXXVI, 158, *Heliothis.*
1882. Smith, Trans. Am. Ent. Soc., X, 220, *Heliothis.*
1885. Riley, 4th Rept. Ent. Comm., 355-384, pl. III and IV, *Heliothis.*
umbrosus Grt.
1863. Grt., Proc. Ent. Soc. Phil., I, 219, *Heliothis.*
1863. Grt., Proc. Ent. Soc. Phil., I, 347, pr. syn.

HABITAT.—Canada; United States generally, throughout the season.

The bibliography given is scant, because in the fourth Report of the U. S. Ent. Comm., there is a very complete list of the literature to 1883. Since that time the species has been again and again treated in economic publications, in most cases without adding anything that is new. The Annual Reports of the United States Department of Agriculture since 1885 should be consulted. For the purposes of this catalogue no more references are needed.

H. phlogophagus G. and R.*

1868. G. & R., Trans. Am. Ent. Soc., I, 180, *Heliothis.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 121, *Heliothis.*
1881. Coquillett, Papilio I, 56, larva.
1882. Smith, Trans. Am. Ent. Soc., X, 221, = *dipsaceous.*
1891. Butler, Entomologist, XXIV, 262, ? an sp. dist. *dipsaceous.*
var. **interjacens** Grt.
1880. Grt., Bull. Bkln. Ent. Soc., III, 30, *Heliothis.*
1881. Grt., Papilio, I, 158, pr. syn.
var. **luteitinctus** Grt.
1875. Grt., Proc. Ac. Nat. Sci. Phil., 1875, 426, *Heliothis.*
1882. Smith, Trans. Am. Ent. Soc., X, 221, = *maritima.*

HABITAT.—Central, Western, and Southern States; Texas in April; Nebraska; Colorado, August to October; New Mexico; British Columbia; Utah; California, in June.

Mr. Grote's types are in the British Museum, where a good series of specimens enabled me to make careful comparisons with the European *dipsaceous* and its varieties. Quite unexpectedly I found that the American form, though a "representative" one, was quite distinct from the European, and that Mr. Grote's names must be restored.

H. scutosus Fabr.

1787. Fabr., Mant. Insect., II, 142, *Noctua.*
1793. Fabr., Ent. Syst., III, 2, 23, *Noctua.*
1811. Oliv., Enc. Meth., VIII, 271, *Noctua.*
1825. Treits., Schmett. Eur., V, 224, *Heliothis.*
1852. Gn., Spec. Gen., Noct., II, 182, *Heliothis.*
1857. Wlk., C. B. Mus., Het., XI, 681, *Heliothis.*
1882. Smith, Trans. Am. Ent. Soc., X, 222, *Heliothis.*
nuchalis Grt.
1878. Grt., Can. Ent., X, 68, *Heliothis.*
1878. Grt., Can. Ent., X, 232, *Heliothis.*
1882. Smith, Trans. Am. Ent. Soc., X, 222, pr. syn.

HABITAT.—Kansas; Colorado; Montana, in May.

Mr. Grote's type is in the British Museum. After careful comparison I have no doubt of its identity with the European species.

H. suavis Hy. Edw. *

1884. Hy. Edw., Papilio, IV, 45, *Heliothis.*

HABITAT.—New Mexico; Colorado, South Park.

The type is with Prof. Snow.

Genus **DERRIMA** Wlk.
1857. Wlk., C. B. Mus., Het., XII, 770.

D. henrietta Grt. *

1864. Grt., Proc. Ent. Soc. Phil., III, 3, pl. II, f. 1, *Philomma.*
1868. Grt., Trans. Am. Ent. Soc., II, 119, *Derrima.*
1882. Smith, Trans. Am. Ent. Soc., X, 236, *Derrima.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 165, = *stellata.*
ab. **stellata** Wlk.
1857. Wlk., C. B. Mus., Het., XII, 770, *Derrima.*
1868. Grt., Trans. Am. Ent. Soc., II, 119, *Derrima.*
1882. Smith, Trans. Am. Ent. Soc., X, 236, ? pr. syn.

HABITAT.—Massachusetts; New York southward; west to the Mississippi States.

Mr. Grote's type I have not seen; but there can be no question as to his species. Specimens of it labeled by Mr. Grote are in the British Museum, where also Walker's type is. The latter is only a somewhat suffused aberration of the normal form and should be cited as such. The white lunules between disk and outer band of primaries are more marked than usual and the secondaries have a rosy flush, else there is no difference that is apparent to me.

Genus **CHAMACLEA** Grt.
1883. Grt., Can. Ent., XV, 76.

C. pernana Grt.

1881. Grt., Papilio, I, 155, *Chariclea.*
1882. Grt., Can. Ent., XIV, 183, *Chariclea.*
1882. Grt., Ill. Essay, 60, pl. 3, f. 27, *Chariclea.*

1882. Smith, Trans. Am. Ent. Soc. x, 222, not a *Chariclea*.
1883. Grt., Can. Ent., xv, 76, *Chamaclea*.
1883. Grt., Proc. Am. Phil. Soc., xxi, 172, *Chamaclea*.

HABITAT.—Arizona.

The types are in the Neumœgen collection.

Genus **ALARIA** Westw.

1841. Westw., in Jardine Nat. Libr., xxxvii, 200.

A. gauræ S. & A.*

1797. S. & A., Insects Ga., ii, 197, pl. 99, *Phalæna*.
1841. Westw., in Jardine Nat. Libr., xxxvii, 200, pl. 24, f. 4, *Alaria*.
1852. Gn., Spec. Gen., Noct., ii, 170, *Rhodophora*.
1857. Wlk., C. B. Mus., Het., xi, 675, *Alaria*.
1882. Smith, Trans. Am. Ent. Soc., x, 224, *Alaria*.
matutina Hbn.
1823. Hbn., Zutræge, 279, ff. 557, 558, *Porphyrinia*.
1852. Gn., Spec. Gen., Noct., ii, 170, pr. syn.
1857. Wlk., C. B. Mus., Het., xi, 675, pr. syn.

HABITAT.—Southern and Southwestern States; Colorado.

A. florida Gn.*

1852. Gn., Spec. Gen., Noct., ii, 171, pl. ii, f. 7, *Rhodophora*.
1857. Wlk., C. B. Mus., Het., xi, 675, *Alaria*.
1865. Grt., Proc. Ent. Soc., Phil., iii, 4, *Alaria*.
1869. Saund., Can. Ent., ii, 6, larva
1869. Croft, Can. Ent., ii, 36, habits of larva and imago.
1879. Saund., Can. Ent., iii, 76, life history.
1879. Kellicott, No. Amer. Ent., i, 30, habits.
1881. Smith, Bull. Bkln. Ent. Soc., iv, 28, habits.
1882. Putman-Cramer, Papilio, ii, 34, habits.

HABITAT.—Canada; United States, east of the Rocky Mountains; Utah, July.

The type is probably with M. Oberthür, at Rennes. This species is in the Harris collection under the name *Cerura rosea*.

A. citronellus G. & R.*

1870. G. & R., Trans. Am. Ent. Soc., iii, 180, pl. ii, f. 79, *Heliothis*.
1875. Grt., Check List, Noct., 19, note 25, *Oxylos*.
1882. Grt., Can. Ent., xiv, 172, *Heliothis*.
1882. Smith, Trans. Am. Ent. Soc., x, 224, *Alaria*.
1882. Grt., New List, 35, *Oxylos*.

HABITAT.—Texas; Colorado.

I have not seen the type, nor do I know where it is to be found.

Genus **RHODOSEA** Grt.

1883. Grt., Can. Ent., xv, 5, 109.

R. julia Grt.*

1883. Grt., Can. Ent., xv, 5, *Rhodosea*.
1883. Grt., Proc. Am. Phil. Soc., xxi, 165, *Rhodosea*.

HABITAT.—New Mexico; Arizona.

A type is in the National Museum from my collection. Mr. Grote gave it me years ago. Other specimens, also marked "type," are in Mr. Neumœgen's collection.

Genus **RHODODIPSA** Grt.
1877. Grt., Bull. Geol. Surv., III, 797.

R. volupia Fitch.*

1858. Fitch, 12th Rept., Trans. N. Y. State Agl. Soc., for 1857, 900-908, *Alaria.*
1877. Grt., Bull. Geol. Surv., III, 797, *Rhododipsa.*
1880. Grt., Bull. Bkln. Ent. Soc., III, 47, *Rhododipsa.*
1882. Grt., Ill. Essay. 62, pl. III, f. 33, *Rhododipsa.*
1882. Smith, Trans. Am. Ent. Soc., x, 250, *Alaria.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 174, *Rhododipsa.*

HABITAT.—Colorado; Texas.

Fitch's type I saw in 1882, with Dr. A. E. Foote, in Philadelphia. It was in very poor condition, yet recognizable. What has become of it since and whether or not it still has an existence, I do not know. The species is, however, well known and correctly named in collections.

R. miniana Grt.

1881. Grt., Papilio, I, 175, *Rhododipsa.*
1882. Grt., Papilio, II, 64, pl. I, ff. 1 and 2, *Rhododipsa.*
1882. Smith, Trans. Am. Ent. Soc., x, 251, *Rhododipsa.*

HABITAT.—New Mexico.

The type is with Prof. Snow, at Lawrence, Kansas.

Genus **TRIOCNEMIS** Grt.
1881. Grt., Papilio, I, 77.

T. saporis Grt.*

1881. Grt., Papilio, I, 77, *Triocnemis.*

HABITAT.—Colorado; Washington; California.

Types are in the Edwards and Neumœgen collections.

Genus **PSEUDACONTIA** Smith.
1882. Smith, Trans. Am. Ent. Soc., x, 246.

P. crustaria Morr.

1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 70, *Acontia.*
1882. Smith, Trans. Am. Ent. Soc., x, 247, *Pseudacontia.*

HABITAT.—Nebraska; Colorado.

The types are in the Tepper collection. The specimen so labeled in the British Museum is unspread and, I think, erroneously determined.

Genus **HELIODORA** Neum.
1891. Neum., Can. Ent., XXIII, 125.

H. magnifica Neum.

1891. Neum., Can. Ent., XXIII, 125, *Heliodora.*

HABITAT.—Houston, Texas.

The type is with Mr. Neumœgen.

Genus **SCHINIA** Hbn.

1816. Hbn., Verzeichniss, 281.

I use this term here in the same broad sense in which I used it in my Revision of the Heliothinæ, Trans. Am. Ent. Soc., x, 225. It is quite likely that the large number of additional species constantly turning up may require its subdivision and the use of some of the generic terms discarded by me. The line of division may perhaps be that indicated in the Revision; but a better may be found on renewed study. The genera included under the above term are:

Tamila, Gn., Spec. Gen., Noct., II, 176.
Anthœcia, Bdv., Ind. Meth., 162.
Lygranthœcia, G. and R., Trans. Am. Ent. Soc., IV, 432.
Euleucyptera, Grt., Proc. Ent. Soc. Phil., IV, 329.
Tricopis, Grt., Bull. Buff. Soc. Nat., Sci., II, 76.
Oria, Hbn., Verzeichniss, 238.
Porrima, Grt., Bull. Geol. Surv., III, 798.

Besides these, Mr. Grote has, on the characters pointed out by me, used the terms *Trichosellus* and *Canidia* in his Revised Check List of 1891. Some of these names may come into use later; but of these *Lygranthœcia* has perhaps the weakest of all claims to consideration. Of the species treated in the above revision, the tibial armature and wing maculation are there figured; but no reference to these figures is here made.

S. chrysellus Grt.*

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 76, *Tricopis*.
1883. Smith, Trans. Am. Ent. Soc., x, 227, *Schinia*.

HABITAT.—Texas, March, May to October; Colorado; New Mexico.

The type is in the British Museum.

S. velaris Grt.*

1879. Grt., Can. Ent., XI, 197, *Tamila*.
1883. Smith, Trans. Am. Ent. Soc., x, 229, *Schinia*.
ochreifascia Smith.
1883. Smith, Trans. Am. Ent. Soc., XVIII, 126, *Schinia*.

HABITAT.—California, July and August.

Mr. Grote's type is in the British Museum; my types are in the National Museum. I was quite surprised to find Mr. Grote's type the same as my species. It means that the specimens I have seen so named in American collections are erroneously determined and that my description and figures in the Revision apply to some other, perhaps undescribed, species. I can not remember from what collection I had my specimens of *velaris*.

S. hulstia Tepper.

1883. Tepper, Trans. Am. Ent. Soc., x, 228, *Schinia*.

HABITAT.—Texas; Colorado.

The type is in the Tepper collection.

S. aleucis Harv.*

1875. Harv., Can. Ent., VII, 117, *Tricopis.*
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 10, pl. II, f. 5, *Tricopis.*
1883. Smith, Trans. Am. Ent. Soc., X, 228, *Schinia.*

HABITAT.—Texas in May and October.

The type is in the British Museum.

S. cumatilis Grt.*

1865. Grt., Proc. Ent. Soc. Phil., IV, 330, pl. II, f. 6, *Euleucyptera.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 220, *Euleucyptera.*
1877. Grt., Bull. Geol. Surv., III, 798, *Euleucyptera.*
1879. Grt., Can. Ent., XI, 207, *Euleucyptera.*
1883. Smith, Trans. Am. Ent. Soc., X, 228, *Schinia.*
sulmula Strk.
1879. Strk., Rept. Chief Eng., 1878–79, p. 1862, pl. II, f. 5. *Heliothis.*
1879. Grt., Can. Ent., XI, 207, pr. syn.

HABITAT.—Colorado, Platte Cañon in August; New Mexico.

Mr. Grote's type is in the collection of the American Entomological Society. Mr. Strecker has his own type.

S. tenuescens Grt.

1883. Grt., Can. Ent., XV, 128, *Lygranthœcia.*

HABITAT.—Arizona.

The type is in the Neumœgen collection.

S. biundulata Smith.

1891. Smith, Trans. Am. Ent. Soc., XVIII, 129, *Schinia.*

HABITAT.—Central Colorado.

The type is in Mr. Neumœgen's collection.

S. sexplagiata Smith.*

1891. Smith, Trans. Am. Ent. Soc., XVIII, 124, *Schinia.*

HABITAT.—Foothills near Denver, Colorado.

The type is in the National Museum.

S. trifascia Hbn. *

1818. Hbn., Zutrage, I, 17, ff. 33, 34, *Schinia.*
1874. Grt., Proc. Bost. Soc. N. H., XVII, 242, *Schinia.*
1880. Grt., Can. Ent., XII, 84, *Schinia.*
1883. Smith, Trans. Am. Ent. Soc., X, 228, *Schinia.*
lineata Wlk.
1857. Wlk., C. B. Mus., Het., XII, 830, *Anthophila.*
1891. Butler, Entomologist, XXIV, 292, pr. syn.

HABITAT.—United States east of the Rocky Mountains; Denver, Colorado.

I did not see Walker's type and give the above synonymy on Mr. Butler's authority. The name was not on my list and I overlooked the specimen.

S. gracilenta Hbn.

1818. Hbn., Zuträge, I, 8, ff. 5, 6, *Schinia*.
1816. Hbn., Verzeichniss, 282, *Schinia*.
1880. Grt., Can. Ent., XII, 84, *Schinia*.
1883. Smith, Trans. Am. Ent. Soc., X, 228, *Schinia*.
oleagina Morr.
1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 67, *Schinia*.
1875. Grt., Can. Ent., VII, 222, pr. syn.
imperspicua Strk.
1876. Strk., Lep. Rhop. et Het., 122, *Heliothis*.
1879. Grt., Can. Ent., XI, 29, pr. syn.

HABITAT.—Southern States; Texas.

Mr. Morrison's type was described from the Graef collection as a variety of *gracilenta* and Mr. Grote made it a synonym. Mr. Strecker's type is in his own collection.

S. simplex Smith.*

1891. Smith, Trans. Am. Ent. Soc., XVIII, 129, *Schinia*.

HABITAT.—Colorado, foothills, July.

The types are in the National Museum.

S. arefacta Hy. Edw.

1884. Hy. Edw., Papilio, IV, 123. *Tamila*.

HABITAT.—Florida.

The type is in the Neumœgen collection.

S. unimacula Smith.*

1891. Smith, Trans. Am. Ent. Soc., XVIII, 126, *Schinia*.

HABITAT.—Colorado.

Types are in Mr. Neumœgen's collection and in the National Museum.

S. obliqua Smith.*

1882. Smith, Trans. Am. Ent. Soc., X, 229, *Schinia*.

HABITAT.—Arizona.

Types are in the National Museum and in the Neumœgen collection.

S. bifascia Hbn.

1818 Hbn., Zutræge, I, 14, ff. 55, 56, *Schinia*.
1816. Hbn., Verzeichniss, 281, *Schinia*.,
1880. Grt., Can. Ent., XII, 85, *Schinia*.
1883. Smith, Trans. Am. Ent. Soc., X, 229, *Schinia*.

HABITAT.—Georgia; Arizona; Colorado.

S. nundina Dru.*

1770. Drury, Illustr., I, 36, pl. 18, f. 5, *Noctua*.
1837. Drury, Illustr., ed. Westw., I, 34, pl. 18, f. 5, *Acontia*,
1852. Gn., Spec. Gen., Noct., II, 176, *Tamila*.
1857. Wlk., C. B. Mus., Het., XII, 697, *Tamila*.

1864. Grt., Proc. Ent. Soc. Phil., III, 4, *Tamila.*
1873. Grt. Bull. Buff. Soc. Nat. Sci., I, 121, *Heliothis.*
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 220, *Tamila.*
1883. Smith, Trans. Am. Ent. Soc., X, 229, *Schinia.*
nigrirena Haw.
1810. Haw., Lep., Britt., 266, *Noctua.*
1829. Steph., Ill. Br. Ent., Haust., III, 114.
1852. Gn., Spec. Gen., Noct., II, 176, pr. syn.

HABITAT.—Middle, Southern, and Central States; New Jersey in July.

S. parmeliana Hy. Edw.

1882. Hy. Edw., Papilio, II, 14, *Lygranthœcia.*
1883. Smith, Trans. Am. Ent. Soc., X, 218, *Lygranthœcia.*
1891. Smith, Trans. Am. Ent. Soc., XVIII, *Lygranthœcia.*

HABITAT.—Maryland.

The unique type is in Mr. Schoenborn's collection. It has a remarkable resemblance to *nundina*, with a totally different ground color.

S. acutilinea Grt.*

1878. Grt., Can. Ent., X. 232, *Lygranthœcia.*
1882. Grt., Ill. Essay, 63, pl. III, f. 34, *Lygranthœcia.*
1883. Smith, Trans. Am., Ent. Soc., X, 229, = *separata.*
separata Grt.
1879. Grt., Can. Ent., XI, 198, *Lygranthœcia.*
1883. Smith, Trans. Am. Ent. Soc., X, 229, *Schinia.*

HABITAT.—Colorado, Glenwood Springs in August; Nevada; Montana; Utah.

Both the types are in the British Museum. After renewed examination and a comparison of other material, I still consider them identical. *Acutilinia* is darker and has the margins of the lines more emphasized; but this fades gradually into the *separata* form. I was in error in using this latter name for the species, since *acutilinea* was earlier described. I was also in error in making *balba* and *walsinghami* synonymous with this species.

S. balba Grt.

1881. Grt., Papilio, I, 156, *Lygranthœcia.*
1883. Smith, Trans. Am. Ent. Soc., X, 229, = *separata.*

HABITAT.—Arizona.

The type is with Mr. Neumœgen; other specimens in the British Museum.

S. coercita Grt.

1881. Grt., Papilio, I, 156, *Lygranthœcia.*
1883. Smith, Trans. Am. Ent. Soc., X, 248, *Lygranthœcia.*

HABITAT.—Arizona.

The type is said to be with Mr. Neumœgen; other specimens are in the British Museum. Comparing *coercita* and *balba*, they are closely allied, the former having a wider median space and both ordinary spots evident, while the latter has the reniform only, marked. The species of *Schinia* are much more numerous and closely allied than I suspected in 1882, and the two preceding are fairly marked and both distinct from *separata*, as species go here.

S. walsinghami Hy. Edw.

1881. Hy. Edw., Papilio, I, 20, *Lygranthœcia.*
1883. Smith, Trans. Am. Ent. Soc., x. 229, *Schinia separata.*

HABITAT.—Oregon.

A type specimen is in the Edwards collection, while a very fine series is in the British Museum. A study of the latter shows that the species is perfectly distinct from *separata* and that my reference in 1882 was hasty and based on insufficient material. The specimen in Mr. Edwards's collection really gives no adequate idea of the species.

S. brucei Smith.*

1891. Smith, Trans. Am. Ent. Soc., XVIII, 125, *Schinia.*

HABITAT.—Colorado, South Park, and Denver.

Types are in the National Museum and in the Rutgers College collection.

S. lynx Gn.*

1852. Gn., Spec. Gen., Noct., II, 185, *Anthœcia.*
1857. Wlk., C. B. Mus., Het., XII, 694, *Anthœcia.*
1864. Grt., Proc. Ent. Soc. Phil., II, 343, pl. VI, f. 6, *Anthœcia.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 120, *Heliothis.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 34, *Melicleptria.*
1875. Grt., Check List Noctuidæ, 18, *Lygranthœcia.*
1883. Smith, Trans. Am. Ent. Soc., x, 230, *Schinia.*

HABITAT.—Massachusetts to Florida, west to the Mississippi; Alabama in September.

The type is in the British Museum.

S. roseitincta Harv.*

1875. Harv., Bull. Buff. Soc. Nat. Sci., II, 278, *Lygranthœcia.*
1883. Smith, Trans. Am. Ent. Soc., x, 248, *Lygranthœcia.*
1891. Smith, Trans. Am. Ent. Soc., XVIII, 124, *Lygranthœcia.*
1891. Smith, List Lepidoptera, 54, *Schinia.*
exaltata Hy. Edw.
1884. Hy. Edw., Papilio, IV, 124, *Melicleptria.*
1891. Smith, Trans. Am. Ent. Soc., XVIII, 124, pr. syn.

HABITAT.—Texas, April and June; Colorado.

Dr. Harvey's type is in the British Museum, while typical specimens of Mr. Edwards' species are in his collection. They are alike specifically, as I have already stated.

S. saturata Grt.*

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 74, *Lygranthœcia.*
1883. Smith, Trans. Am. Ent. Soc., x, 230, *Schinia.*
rubiginosa Strk.
1876. Strk., Lep. Rhop. et Het., 122, *Heliothis.*
1883. Smith, Trans. Am. Ent. Soc., x, 230, pr. syn.

HABITAT.—Massachusetts; Texas; Kansas; Southern California; Georgia in October; Florida.

Mr. Grote's type should be in the collection of the American Entomological Society, but I have not found it there. Mr. Streeker's type is in his own collection. In the British Museum are specimens labeled by Mr. Grote which are the same as the species described by me in the "Revision."

S. diffusa Smith.*

1891. Smith, Trans. Am. Ent. Soc., XVIII, 125, *Schinia*.

HABITAT.—South Park, Colorado.

The types are in the National Museum.

S. sordida Smith.*

1883. Smith, Trans. Am. Ent. Soc., X, 230, *Schinia*.

HABITAT.—Selma, Alabama; Texas.

The type is in the National Museum.

S. tertia Grt.*

1874. Grt., Proc. Ac. Nat. Sci. Phil., 1874, 212, *Tamila*.
1875 Grt., Bull. Buff. Soc. Nat. Sci., II, 220, *Tamila*.
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 10. *Tamila*.
1882. Smith, Trans. Am. Ent. Soc., X, 231, *Schinia*.

HABITAT.—Texas, May, September, and October.

The type is in the British Museum.

S. albafascia Smith.*

1883. Smith, Trans. Am. Ent. Soc., X, 231, *Schinia*.

HABITAT.—Utah, Fort Thornburgh; South Park, Colorado, August.

The type is in the U. S. National Museum.

S. regia Strk.*

1876. Strk., Lep. Rhop. et Het., 121, *Heliothis*.
1883. Smith, Trans. Am. Ent. Soc., X, 231, *Schinia*.

HABITAT.—Kansas; Texas; Colorado.

The type is with Mr. Strecker.

S. sanguinea Geyer.

1832. Geyer, Zutræge, IV, 9, ff. 613, 614, *Oria*.
1852. Gn., Spec. Gen., Noct., II, 167, *Oria*.
1857. Wlk., C. B. Mus., Het., XI, 672, *Oria*.
1865. Grt., Proc. Ent. Soc. Phil., III, 4, *Oria*.
1877. Grt., Bull. Geol. Surv., III, 798, *Porrima*.
1883. Smith, Trans. Am. Ent. Soc., X, 232, *Schinia*.
carmosina Neum.
1883. Neum., Papilio, III, 142, *Schinia*.
1891. Smith, List Lepid., 54, pr. syn.

HABITAT.—Southern States; Florida; Texas.

Mr. Neumœgen's type is in his own collection. Mr. Neumœgen called attention to the fact that two forms were confused under the term *sanguinea* and described the smaller and most intensely colored form as *carmosina*. Unfortunately that is exactly the form figured by Geyer, and Mr. Strecker had previously recognized that fact and described as *gloriosa* the larger, paler form.

S. gloriosa Strk.*

1876. Strk., Lep. Rhop. et Het., 132, *Heliothis*.
1883. Smith, Trans. Am. Ent. Soc., XVIII, 249, *Heliothis*.
sanguinea ‡ Neum.
1883. Neum., Papilio, III, 142, *Schinia*.

HABITAT.—Texas.

The type is with Mr. Strecker.

S. cupes Grt.

1875. Grt., Trans. Am. Ent. Soc., v, 113, *Heliothis*.
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 311, pl. III, f. 4, *Heliothis*.
1883. Smith, Trans. Am. Ent. Soc., x, 232, *Schinia*.
1883. Grt., Proc. Am. Phil. Soc., XXI, 165, *Heliothis*.
1890. Grt., Revised Check List, 36, *Trichosellus*.
crotchii Hy. Edw.
1875. Hy. Edw., Proc. Cal. Ac. Sci., VI, 135, *Heliothis*.
1883. Smith, Trans. Am. Ent. Soc., x, 232, pr. syn.

HABITAT.—Texas, May; Colorado; Oregon; Washington; California.

The types, both of *cupes* and *crotchii* are in the British Museum.

S. jaguarina Gn.*

1852. Gn., Spec. Gen., Noct., II, 184, pl. 9, f. 11, *Anthœcia*.
1857. Wlk., C. B. Mus., Het., XI, 694, *Anthœcia*.
1864. Grt., Proc. Ent. Soc. Phil., III, 528, *Anthœcia*.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 120, *Heliothis*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 126, *Melicleptria*.
1877. Uhler, Bull. Geol. Surv., III, 769, *Anthœcia*.
1883. Smith, Trans. Am. Ent. Soc., x, 232, *Schinia*.

HABITAT.—Georgia; Nebraska in August; Colorado; Kansas; Texas.

The type is with M. Oberthür, at Rennes.

S. arcifera Gn.*

1852. Gn., Spec. Gen., Noct., II, 184, *Anthœcia arcigera*.
1852. Gn., Spec. Gen., Noct., III, 399, *Anthœcia arcifera*.
1857. Wlk., C. B. Mus., Het., XI, 694, *Anthœcia*.
1863. Grt., Proc. Ent. Soc. Phil., II, 340, pl. VI, f. 3, *Anthœcia*.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 119, *Heliothis*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 34, *Melicleptria*.
1883. Smith, Trans. Am. Ent. Soc., x, 232, *Schinia*.
spraguei Grt.
1863. Grt., Proc. Ent. Soc. Phil., II, 340, pl. VI, ff. 4, 5, *Anthœcia*.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 120, *Heliothis*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 34, *Melicleptria*.
1875. Morr., Proc. Bost. Soc. N. H., XVIII, 123, pr. syn.
1883. Smith, Trans. Am. Ent. Soc., x, 232, *Schinia*.

HABITAT.—Eastern and Middle States, August and September; New Mexico; Texas; Kansas.

Guenee's type is the Oberthür collection. I have not been able to locate Mr. Grote's type. Mr. Grote described from a number of specimens from various collections. The two names seem to refer to the sexes and not to distinct varieties.

S. petulans Hy. Edw,

1881. Hy. Edw., Papilio, IV, 123, *Anthœcia.*

HABITAT.—Florida.

The type is in Mr. Neumœgen's collection.

S. spinosæ Gn.*

1852. Gn., Spec. Gen., Noct., II, 182, pl. IX, f. 10, *Heliothis.*
1857. Wlk., C. B. Mus., Het., XI, 687, *Heliothis.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 118, *Heliothis.*
1883. Smith, Trans. Am. Ent. Soc., X, 233, *Schinia.*
1890. Grt., Revised Check List, 34, *Eupanychis.*
hirtella G. & R.
1866. G. & R., Proc. Ent. Soc. Phil., VI, 19, pl. III, f. 3, *Anthœcia.*
1868. G. & R., Trans. Am. Ent. Soc., III, 180, pr. syn.
1870. Grt., Trans. Am. Ent. Soc., IV, 432, pr. syn.

HABITAT.—Canada; Eastern, Middle, and Central States.

Guenee's type came from the Coll. Feisthamel—where that is at present, I can not say. The whereabouts of the Grote & Robinson type is also unknown to me. It is one of the species that should be in the collection of the American Entomological Society.

S. crenilinea Smith.

1891. Smith, Trans. Am. Ent. Soc., XVIII, 129, *Schinia.*

HABITAT.—Southern Texas.

The types are in the Neumœgen collection.

S. lupatus Grt.

1875. Grt., Can. Ent., VII, 224, *Heliothis.*
1883. Smith, Trans. Am. Ent. Soc., X, 233, *Schinia.*
1883. Grt., Can. Ent., XV, 128, *Heliothis.*

HABITAT.—Texas.

The type of this species is in the British Museum. The foretibiæ. have one inner and one outer claw or spine. Wing form of *Schinia.* Looks like an *Aletia* at first sight, with a small black orbicular, and a black, white-lined reniform. I am not at all sure that I had this species before me in 1883, and at all events have not had it since.

S. packardii Grt.*

1864. Grt., Proc. Ent. Soc. Phil., III, 528, pl. VI, f. 2, *Anthœcia.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 120, *Heliothis.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 34, *Melicleptria.*
1877. Grt., Bull. Geol. Surv., III, 798, *Lyranthœcia.*
1883. Smith, Trans. Am. Ent. Soc., X, 234, *Schinia.*

mortua Grt.
1864. Grt., Proc. Ent. Soc. Phil., III, 528, pl. VI, f. 1, *Anthœcia.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 120, *Heliothis.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 34, *Melicleptria.*
1877. Grt., Bull. Geol. Surv., III, 798, ? pr. syn.
1883. Smith, Trans. Am. Ent. Soc., X, 234, *Schinia.*
nobilis Grt.
1864. Grt., Proc. Ent. Soc. Phil., III, 529, pl. VI, f. 3, *Anthœcia.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 120, *Heliothis.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 34, ? *packardii*, var.
1883. Smith, Trans. Am. Ent. Soc., X, 234, *Schinia.*

HABITAT.—Texas, Arizona, Colorado.

The types are all in the collection of the American Entomological Society. The differences between them consist in the relative distinctness of the maculation, the discal and basal black spot of secondaries disappearing entirely in *mortua.* In retaining the term *packardii* for this species instead of *mortua*, which has priority by half a page, I feel sure that I am in accord with Mr. Grote's wishes on the subject.

S. bicuspida Smith.

1891. Smith, Trans. Am. Ent. Soc., XVIII, 127, *Schinia.*

HABITAT.—Southern Texas.

The type is with Mr. Neumœgen.

S. thoreaui G. & R.*

1868. G. & R., Trans. Am. Ent. Soc., III, 181, pl. II, f. 80, *Anthœcia.*
1870. G. & R., Trans. Am. Ent. Soc., IV, 432, *Lygranthœcia.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 115, *Lygranthœcia.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 33, *Lygranthœcia.*
1883. Smith, Trans. Am. Ent. Soc., X, 234, *Schinia.*

HABITAT.—Texas; Alabama; Kansas; Indiana.

I have not seen the type, nor do I know where it is.

S. marginata Haw.*

1810. Haw., Lep. Britt., 374, *Crambus.*
1834. Steph., Ill. Brit. Ent., Haust., IV, 26, *Pyralis.*
1836. Wood, Ind. Ent., pl. 54, f. 68, *Pyralis.*
1852. Gn., Spec. Gen., Delt., 128, *Anthœcia.*
1857. Westw. & Humph., Brit. Moths, II, 91–92, *Pyralis.*
1863. Grt., Proc. Ent. Soc. Phil., II, 339, *Anthœcia.*
1870. G. & R., Trans. Am. Ent. Soc., IV, 432, *Lygranthœcia.*
rivulosa Gn.
1852. Gn., Spec. Gen., Noct., II, 184, pl. IX, f. 12, *Anthœcia.*
1854. Gn., Spec. Gen., Delt., 128, pr. syn.
1857. Wlk., C. B. Mus., Het., XI, 694, *Anthœcia.*
1863. Grt., Proc. Ent. Soc. Phil., II, 339, *Anthœcia.*
1883. Smith, Trans. Am. Ent. Soc., X, 234, *Schinia.*
divergens Wlk.
1857. Wlk., C. B. Mus., Het., XII, 836, *Microphysa.*
1868. G. & R., Trans. Am. Ent. Soc., II, 78, pr. syn.
contracta Wlk.
1857. Wlk., C. B. Mus., Het., XII, 836, *Microphysa.*

1868. G. & R., Trans. Am. Ent. Soc., II, 79, pr. syn.
designata Wlk.
1865. Wlk., C. B. Mus., Het., XXXIII, 958, *Euclidia.*
1868. G. & R., Trans. Am. Ent. Soc., II, 87, pr. syn.

HABITAT.—Middle, southern, and central States, July and August. A typical specimen of Guenée's species and all of Walker's types are in the British Museum. I did not see that of *M. divergens;* but the others are as referred by Messrs. Grote and Robinson and I have no doubt this is also correctly placed in the synonymy.

S. digitalis Smith.*

1891. Smith, Trans. Am. Ent. Soc., XVIII, 128, *Schinia.*

HABITAT.—Dallas, Texas.

The type is in the National Museum.

S. constricta Hy. Edw.

1882. Hy. Edw., Papilio, II, 128, *Lygranthœcia.*
1883. Smith, Trans. Am. Ent. Soc., X, 235, *Schinia.*

HABITAT.—North Carolina.

The type is in Mr. Neumœgen's collection.

S. tuberculum Hbn.

1823. Hbn., Zuträge, III, 517, 518, *Melicleptria.*
1852. Gn., Spec. Gen., Noct., II, 185, *Anthœcia.*
1857. Wlk., C. B. Mus., Het., XI, 695, *Anthœcia.*
1863. Grt., Proc. Ent. Soc. Phil., II, 343, *Anthœcia.*
1864. Grt., Proc. Ent. Soc. Phil., III, 531, *Melicleptria.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 119, *Heliothis.*
1883. Smith, Trans. Am. Ent. Soc., X, 247, *Anthœcia.*
dorsilutea Wlk.
1857. Wlk., C. B. Mus., Het., XI, 695, *Anthœcia.*

HABITAT.—Pennsylvania; Georgia; Florida.

The type of *dorsilutea* is the same as the *tuberculum* of the Grote collection, which I believe to be correctly identified. The fore tibiæ have one inner and two outer claws. In appearance the species resembles *lynx;* but the median and s. t. lines are more ragged, median space narrower, ordinary spots not distinct; black border of secondaries broad. Walker's species is from "locality unknown."

S. brevis Grt.*

1864. Grt., Proc. Am. Ent. Soc., III, 530, pl. VI, f. 4, *Anthœcia.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 119, *Heliothis.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 34, *Melicleptria.*
1883. Smith, Trans. Am. Ent. Soc., X, 235, *Schinia.*
var. atrites Grt.*
1864. Grt., Proc. Am. Ent. Soc., III, 530, pl. VI, f. 5, *Anthœcia.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 119, *Heliothis.*
1883. Smith, Trans. Am. Ent. Soc., X, 235, *Schinia.*

HABITAT.—Colorado; New Mexico; Illinois and Massachusetts in September; New York; Iowa.

The types should be in Philadelphia in the Coll. American Ent. Soc., but I have not been able to find them there.

S. septentrionalis Wlk.

1858. Wlk., C. B. Mus., Het., xv, 1744, *Omia.*

HABITAT.—Illinois.

This seems a good species, the type of which is in the British Museum. There are two inner and three outer claws to the fore tibia. Secondaries black; primaries very dark; terminal space a little lighter; median space with a little yellow intermixed; median lines narrow, white.

S. concinna Smith.

1891. Smith, Trans. Am. Ent. Soc., XVIII, 128, *Schinia.*

HABITAT.—Southern Texas.

The type is in the Neumœgen collection.

S. errans Smith.*

1883. Smith, Trans. Am. Ent. Soc., x, 235, *Schinia.*

HABITAT.—Arizona.

The type is in the National Museum.

S. inclara Strk.

1876. Strk., Lep. Rhop. et Het., 122, *Heliothis.*
1883. Smith, Trans. Am. Ent. Soc., x, 235, *Schinia.*

HABITAT.—Texas.

The type is with Mr. Strecker.

S. meskeana Grt.*

1875. Grt., Can. Ent., VII, 234, *Lygranthœcia.*
1881. Grt., Papilio, I, 157, *Lygranthœcia.*
1883. Smith, Trans. Am. Ent. Soc., x, 235, *Schinia.*
fastidiosa Strk.
1876. Strk., Lep. Rhop. et Het., 121, *Heliothis.*
1876. Grt., Can. Ent., VIII, 26, pr. syn.
rufimedia Grt.
1883. Grt., Bull. Bkln. Ent. Soc., III, 31, *Lygranthœcia.*
1883. Smith, Trans. Am. Ent. Soc., x, 235, pr. syn.

HABITAT.—Texas; Florida.

The types of Mr. Grote's species are in the British Museum, and a specimen of *rufimedia*, also marked "type" by Mr. Grote, is in the Hulst collection. The only observable difference between them is that *rufimedia* has a little more black on the secondaries. Mr. Strecker's type is in his own collection.

S. limbalis Grt.

1875. Grt., Proc. Ac. Nat. Sci. Phil., 1875, 421, *Lygranthœcia.*
1883. Smith, Trans. Am. Ent. Soc., x, 247, *Lygranthœcia.*

HABITAT.—Kansas.

The type is in the British Museum and is a species I had not before seen. The tibial armature can not be made out as the legs are curled under in the specimen. It resembles *arcifera*, but is smaller and without median lines.

S. ultima Strk.*

1876. Strk., Lep. Rhop. et Het., 122, *Heliothis*
1881. Grt., Papilio, I, 157, *Lygranthœcia.*
1883. Smith, Trans. Am. Ent. Soc., x, 236, *Schinia.*

HABITAT.—Texas.

The type is in the Strecker collection.

G. scissa Grt.*

1876. Grt., Proc. Bost. Soc. N. H., XVIII, 151, *Lygranthœcia.*
1883. Smith, Trans. Am. Ent. Soc., x, 252, *Schinia.*
1890. Grt., Revised Check List, 36, *Canidia.*

HABITAT.—Florida.

The type is in the British Museum. It looks more like *Melicleptria* than the specimen retained by Mr. Thaxter. Mr. Grote's genus is based, apparently, on the characters I pointed out, but if the species is removed from *Schinia*, it must go to *Pseudotamila.*

S. siren Strk.

1876. Strk., Lep. Rhop. et Het., 122, *Heliothis.*
1883. Smith, Trans. Am. Ent. Soc., x, 248, *Heliothis.*

HABITAT.—Texas.

The type is with Mr. Strecker. The tibial armature is as in *ultima.*

S. nubila Strk.

1876. Strk., Lep. Rhop. et Het., 122, *Heliothis.*
1883. Smith, Trans. Am. Ent. Soc., x, 248, *Heliothis.*

HABITAT.—Texas.

The type is with Mr. Strecker. The tibial armature is as in *ultima.*

S. lanul Strk.

1877. Strck., Lep. Rhop. et Het., 132, *Heliothis.*
1883. Smith, Trans. Am. Ent. Soc., x, 249, *Heliothis.*

HABITAT.—Texas.

The type is with Mr. Strecker. The anterior tibiæ have an inner and four outer claws, and the species is thus related to *tertia.*

By a regretable oversight the three last-named species were omitted from my list of Lepidoptera. The accident happened because in my Revision they were among the unknown species, and, after seeing the types and annotating my copy, I failed to enter them in the list of species where they belonged.

Genus **DASYSPOUDEA** Smith.

1883. Smith, Trans. Am. Ent. Soc., x, 213.

D. lucens Morr.*

1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 69, *Heliothis.*
1882. Grt., Can. Ent., XIV, 175, *Tamila.*
1883. Smith, Trans. Am. Ent. Soc., x, 214, *Dasyspoudea.*
var. **luxuriosa** Grt.
1882. Grt., Can. Ent., XIV, 175, *Tamila.*
1883. Smith, Trans. Am. Ent. Soc., x, 214, pr. syn.

HABITAT.—Nebraska; Montana; Colorado; New Mexico.

I have not seen Mr. Morrison's type, nor do I know where it is at present. The type of the variety is with Mr. Neumœgen.

D. meadii Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 121, pl. 3, f. 5, *Heliothis.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 35, et 220, *Tamila.*
1879. Strk., Rept. Chief Eng., 1878–'79, p. 1862, *Heliothis.*
1883. Smith, Trans. Am. Ent. Soc., x, 214, *Dasyspoudea.*

HABITAT.—Montana; Colorado in July; Black Hills.

The type is in the British Museum.

Genus **PSEUDANTHŒCIA** Smith.

1883. Smith, Trans. Am. Ent. Soc., x, 213.

P. tumida Grt.*

1880. Grt., Bull. Bkln. Ent. Soc., III, 30, *Lygranthœcia.*
1882. Grt., Can. Ent., XIV, 186, *Tamila.*
1883. Smith, Trans. Am. Ent. Soc., x, 213, *Pseudanthœcia.*

HABITAT.—Colorado.

Mr. Grote had specimens from his own collection and from those of Tepper and Neumœgen; but neither in the British Museum nor in the Tepper collection is there a "type."

Genus **STYLOPODA** Smith.

1891. Smith, Trans. Am. Ent. Soc., XVIII, 131.

S. cephalica Smith.*

1891. Smith, Trans. Am. Ent. Soc., XVIII, 131, *Stylopoda.*

HABITAT.—California.

The type is in the National Museum.

Genus **SYMPISTIS** Hbn.

1816. Hübner, Verzeichniss, 257.

S. proprius Hy. Edw.

1881. Hy. Edw., Papilio, I, 19, *Euros.*
1883. Smith, Trans. Am. Ent. Soc., x, 213, *Sympistis.*

HABITAT.—Siskiyou County, California.

The type is in the Edwards collection.

Genus **PSEUDOTAMILA** Smith.

1883. Smith, Trans. Am. Ent. Soc., x, 238.

P. vanella Grt.*

1877. Grt., Can. Ent., XI, 197, *Tamila.*
1883. Smith, Trans. Am. Ent. Soc., x, 239, *Pseudotamila.*

HABITAT.—Nevada; California.

The type is in the British Museum.

P. perminuta Hy. Edw.

1881. Hy. Edw., Papilio, I, 21, *Melicleptria.*
1883. Smith, Trans. Am. Ent. Soc., x, 239, *Pseudotamila.*

HABITAT.—Sierra Nevada, California.

The types are in the Edwards collection.

Genus **MELAPORPHYRIA** Grt.

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 75.

M. immortua Grt.*

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 75, 220, *Melaporphyria.*
1883. Smith, Trans. Am. Ent. Soc., x, 237, *Melaporphyria.*

HABITAT.—Massachusetts and New York in June; Colorado.

The type is in Dr. Lintner's collection at Albany.

M. prorupta Grt.

1873. Grt., Trans. Am. Ent. Soc., IV, 294, *Heliothis.*
1873. Grt., Bull Buff. Soc. Nat. Sci., I, 118, *Heliothis.*
1883. Smith, Trans. Am. Ent. Soc., x, 238, *Melaporphyria.*
venusta Hy. Edw.
1875. Hy. Edw., Proc. Cal. Ac. Sci., VI, 133, *Melicleptria.*
1878. Grt., Bull. Geol. Surv., V, 183, pr. syn.

HABITAT.—California; Oregon.

The types should be in the American Ent. Society's collection; but I have not seen them there.

M. belladonna Hy. Edw.

1081. Hy. Edw., Papilio, I, 20, *Melicleptria.*
1883. Smith, Trans. Am. Ent. Soc., x, 238, *Melaporphyria.*
1890. Grt., Revised Check List, 34, *Dysocnemis.*

HHBITAT.—Utah.

The types are in the Edwards and Neumœgen collections.

M. oregona Hy. Edw.*

1875. Hy. Edw., Proc. Cal. Ac. Sci., VI, 135, *Melicleptria.*
1883. Smith, Trans. Am. Ent. Soc., x, 138, = *ononis*
1891. Butler, Entomologist, XXIV, 293, an sp. dist.

HABITAT.—Colorado; Nevada; Oregon.

Mr. Butler is quite correct in separating Mr. Edwards's species from *ononis;* but he is in error in charging Mr. Grote with the combination.

The blunder was mine, based on insufficient material. I am much less ready nowadays to believe in the specific identity of European and American species. *Oregona* is near to and represents *ononis*, as *phlogophagus* represents *dipsaceous*. So, also, Mr. Butler seems not to know that I am responsible for uniting *Adonisea* with *Melicleptria*, a union which I still consider perfectly proper.

Genus **MELICLEPTRIA** Hbn.

1816. Hübner, Verzeichniss, 262.

M. celeris Grt.

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 148, *Melicleptria*.
1882. Grt., New List, 36, *Euros*.
1882. Grt., Can. Ent., XIV, 171, *Melicleptria*.
1883. Smith, Trans. Am. Ent. Soc., X, 244, *Melicleptria*.

HABITAT.—Southern California.

The type is in the Edwards collection.

M. pulchripennis Grt.*

1874. Grt., Proc. Bost. Soc. N. H., XVI, 241, *Melicleptria*.
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 220, *Adonisea*.
1882. Grt., Ill. Essay, 62, pl. III, f. 31, *Adonisea*.
1883. Smith, Trans. Am. Ent. Soc., X, 244, *Melicleptria*.
languida Hy. Edw.
1881. Hy. Edw., Papilio, I, 20, pr. var.
1883. Smith, Trans, Am. Ent. Soc., X, 244, pr. syn.

HABITAT.—California; Colorado.

I have not seen the type. The British Museum specimens seem not to be such; but are the species commonly so known in American collections.

M. græfiana Tepper.

1883. Tepper, Trans. Am. Ent. Soc., X, 245, *Melicleptria*.

HABITAT.—Southern California.

The type is in the Tepper collection.

M. villosa Grt.*

1864. Grt., Proc. Ent. Soc. Phil., III, 531, pl. VI, f. 6, *Melicleptria*.
1868. G. R., Trans. Am. Ent. Soc., III, 181, *Anthœcia*.
1883. Smith, Trans. Am. Ent. Soc., X, 244, *Melicleptria*.
pauxillus Grt.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 118, pl. III, f. 6, *Heliothis*.
1883. Smith, Trans. Am. Ent. Soc., X, 244, pr. syn.
var. **persimilis** Grt.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 117, pl. III, f. 11, *Heliothis*.
1883. Smith, Trans. Am. Ent. Soc., X, 214, pr. syn.

HABITAT.—Colorado; California.

The type of *villosa* should be in the collection of the American Entomological Society; but I have not found it there. The type of *pauxillus* is in the Tepper collection; a type of *persimilis* is in the British Museum, and another specimen, also marked "type," is in the Tepper collection.

M. honesta Grt.

1881. Grt., Papilio, I, 77, *Melicleptria.*
1883. Smith, Trans. Am. Ent. Soc., x, 245, *Melicleptria.*

HABITAT.—Mount Hood, Oregon.

The type is in the Neumœgen collection.

M. sueta Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 117, pl. III, f. 10, *Heliothis.*
1883. Smith, Trans. Am. Ent. Soc., x, 245, *Melicleptria.*
californicus Grt.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 149, *Heliothis.*
1883. Smith, Trans. Am. Ent. Soc., x, 245, pr. syn.

HABITAT.—Colorado; California.

Types of both names are in the Tepper collection, and a specimen of *californicus*, also marked "type," is in the British Museum.

M. vacciniæ Hy. Edw.

1875. Hy. Edw., Proc. Cal. Ac. Sci., VI, 134, *Melicleptria.*
1883. Smith, Trans. Am. Ent. Soc., x, 251, *Melicleptria.*

HABITAT.—Sierra Nevada, California.

The type is in the Edwards collection.

M. septentrionalis Hy. Edw.*

1884. Hy. Edw., Papilio, IV, 45, *Melicleptria.*

HABITAT.—Hudson Bay Territory.

The types are in the Neumœgen collection. Mr. Neumœgen thinks this is the same as *ononis* Fab. He may be right; I have not compared them.

Genus **HELIOLONCHE** Grt.

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 115.

H. modicella Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 116, pl. III, f. 12, *Heliolonche.*
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 220, *Heliolonche.*
1883. Smith, Trans. Am. Ent. Soc., x, 242, *Heliolonche.*

HABITAT.—California, in June; Colorado.

The type is in the British Museum.

Genus **HELIOSEA** Grt.

1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 220.

H. pictipennis Grt.

1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 220, *Heliosea.*
1882. Grt., Ill. Essay, 62, pl. III, f. 32, *Heliosea.*
1883. Smith, Trans. Am. Ent. Soc., x, 239, *Heliosea.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 172, *Heliosea.*

HABITAT.—California.

The type is in the British Museum; it has no legs, no head, and only two wings. Whether it was in that condition when the figure was made I can not say, of course.

Genus **HELIOPHANA** Grt.

1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 220.

H. mitis Grt.

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 116, pl. III, f. 7, *Melicleptria.*
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 220, *Heliophana.*
1883. Smith, Trans. Am. Ent. Soc., X, 240, *Heliophana.*
obliquata Smith.
1891. Smith, Trans. Am. Ent. Soc., XVIII, 131, *Heliophana.*

HABITAT.—Texas; Mississippi.

Mr. Grote's type is in the British Museum; my type is with Mr. Neumœgen. The two are but forms of one species, as I rather suspected when describing *obliquata.*

H. amaryllis Smith.*

1891. Smith, Trans. Am. Ent. Soc., XVIII, 130, *Heliophana.*

HABITAT.—California.

The type is in the National Museum.

H. bina Gn.

1852. Gn., Spec. Gen., Noct., II, 186, *Anthœcia.*
1857. Wlk., C. B. Mus., Het., XI, 695, *Anthœcia.*
1863. Grt., Proc. Ent. Soc. Phil., II, 334, *Anthœcia.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 119, *Heliothis.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 34, *Melicleptria.*
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 220, *Heliophana.*
1883. Smith, Trans. Am. Ent. Soc., X, 240, *Heliophana.*

HABITAT.—Nebraska; New York in June.

The type, which I have not seen, is with M. Oberthür, at Rennes.

Genus **XANTHOTHRIX** Hy. Edw.

1878. Hy. Edw., Proc. Cal. Ac. Sci., Pac. Coast Lep., No. 29.

X. ranunculi Hy. Edw.*

1878. Hy. Edw., Proc. Cal. Ac. Sci., Pac. Coast Lep., No. 29, July 1, 1878.
1883. Smith, Trans. Am. Ent. Soc., X, 241, *Xanthothrix.*

HABITAT.—California.

The type is in the Edwards collection. I have the paper in which it is described only as a separate and believe, indeed, that it has not been published in any other way.

X. neumœgeni Hy. Edw.*

1881. Hy. Edw., Papilio, I, 101, *Xanthothrix.*
1882. Grt., Papilio, II, 122, *Euedwardsia.*
1883. Smith, Trans. Am. Ent. Soc., X, 241, *Xanthothrix.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 165, *Euedwardsia.*

HABITAT.—California.

Types are in the Edwards and Neumœgen collections.

Genus **AXENUS** Grt.

1873. Grt. Bull. Buff. Soc. Nat. Sci., I, 152.

A. arvalis Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 152, pl. IV, f. 8, *Axenus.*
1883. Smith, Trans. Am. Ent. Soc., x, 242, *Axenus.*
var. **ochraceus** Hy. Edw.
1875. Hy. Edw., Proc. Cal. Ac. Sci., VI, 136, pr. var.
var. **amplus** Hy. Edw.
1875. Hy. Edw., Proc. Cal. Ac. Sci., VI, 136, pr. var.

HABITAT.—Colorado; California.

Mr. Grote's type is in the British Museum; types of the varieties are in the Edwards collection. It is questionable whether these names can be retained, as a good series from any locality shows all the forms, with all intermediate variations.

Genus **HELIACA** H. Sch.

1853. H. Sch., Schmett. Eur., II, 370.

H. diminutiva Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 148, *Heliothis.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 34, *Melicleptria.*
1883. Smith, Trans. Am. Ent. Soc., x, 245, *Heliaca.*

HABITAT.—California; Nevada; Colorado, South Park.

Types are in the Tepper collection and in the British Museum.

H. fasciata Hy. Edw.

1875. Hy. Edw., Proc. Cal. Ac. Sci., VI, 134, *Melicleptria.*
1883. Smith, Trans. Am. Ent. Soc., x, 246, *Heliaca.*

HABITAT.—Plover Co., Colorado.

The type is in the Edwards collection.

H. dubitans Tepper.

1883. Tepper, Trans. Am. Ent. Soc., x, 246, *Heliaca.*

HABITAT.—Nevada.

The type is in the Tepper collection.

H. nexilis Morr.*

1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 102, *Eutricopis.*
1880. Grt., Bull. Bkln. Ent. Soc., III, 38, *Melicleptria.*
1883. Smith, Trans. Am. Ent. Soc., x, 246, *Heliaca.*
elaborata Hy. Edw.
1881. Hy. Edw., Papilio, I, 21, *Melicleptria.*
1883. Smith, Trans. Am. Ent. Soc., x, 246, pr. syn.

HABITAT.—Colorado; California in June.

Mr. Morrison's type is in the Tepper collection; Mr. Edwards's type is in his own collection.

Genus **ANARTA** Ochs.

1816. Ochs., Schmett. Eur., IV, 90.

A. acadiensis Beth.*

1869. Beth., Trans. Nov. Sc. Inst. Nat. Sci., II, 84, figure, *Anarta.*
1869. Beth., Can. Ent., II, 64, *Anarta.*

HABITAT.—Nova Scotia.

The type is with Dr. Bethune. The species has been referred with more or less doubt to *myrtilli* Linn., and it may be that species. I am by no means satisfied that such is the case, however, and prefer to retain Dr. Bethune's name until careful comparisons can be made.

A. cordigera Thunb.*

1788. Thunb., Mus. Nat. Ac. Ups. Diss., pt. VI, 72, f. 4, *Noctua.*
1816. Hbn., Verzeichniss, 220, *Anarta.*
1852. Gn., Spec. Gen., Noct., II, 194, *Anarta.*
1857. Wlk., C. B. Mus., Het., XI, 702, *Anarta.*
1860. Moeschl., Wien. Ent. Monatschr., IV, 367, *Anarta.*
luteola G. & R.
1865. G. & R., Proc. Ent. Soc. Phil., IV, 493, pl. III, ff. 5 and 6, *Anarta.*
1869. Beth., Can. Ent., I, 87, *Anarta.*
1873. Strk., Lep. Rhop. et. Het., 40, pr. syn.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 31, pr. syn.

HABITAT.—Canada; Labrador; Colorado.

The type of Grote and Robinson's species should be in the collection of the American Entomological Society, and Mr. Strecker speaks of seeing it there in 1873. I have not found it from 1882, when I made my first notes on the collection, to 1891, when I again went over all the arranged material and found some few species previously overlooked.

A. melaleuca Thunb.*

1791. Thunb., Ins. Suec., pars II, 42, *Noctua.*
1816. Hbn., Samml. Eur. Schmett., II, pl. 415, *Sympistis.*
1852. Gn., Spec. Gen., Noct., II, 193, *Anarta.*
1857. Wlk., C. B. Mus., Het., XI, 699, *Anarta.*
1860. Mœschl., Wien. Ent. Monatschr., IV, 367, *Anarta.*
1874. Grt., Proc. Bost. Soc. N. H., XVI, 244, *Anarta.*
bicycla Pack.
1867. Pack., Proc. Bost. Soc. N. H., XI, 41, *Anarta.*
1871. Stgr., Cat. Lep. Eur., 128, pr. syn.
1874. Grt., Proc. Bost. Soc. N. H., XVI, 244, pr. syn.

HABITAT.—Labrador.

Dr. Packard's type is in the collection of the Mus. Comp. Zoölogy at Cambridge. Mr. Morrison has labelled a specimen now in the National Museum as a "type," of *bicycla.*

A. melanopa Thunb.*

1791. Thunb., Diss. Ent., II, 42, f. 12, *Noctua.*
1829. Bdv., Ind. Meth., 161, *Anarta.*
1852. Gn., Spec. Gen., Noct., II, 190, *Anarta.*

1857. Wlk., C. B. Mus., Het., XI, 697, *Anarta.*
1879. Grt., Bull. U. S. Nat. Mus., XV, 160, *Anarta.*
1875. Morr., Psyche, I, 44, *Anarta.*
nigrolunata Pack.
1867. Pack., Proc. Bost. Soc. N. H., XI, 40, *Anarta.*
1871. Stgr., Cat. Lep. Eur., 128, pr. syn.
1874. Grt., Proc. Bost. Soc. N. H., XVI, 244, pr. syn.

HABITAT.—Labrador in July; Mt. Washington, New Hampshire; South Park, Colorado; Rocky Mts., 13,000 feet; Arctic America.

Dr. Packard's type is at Cambridge, in the Museum of Comparative Zoölogy.

A. quadrilunata Grt.*

1874. Grt., Proc. Bost. Soc. N. H., XVI, 241, *Anarta.*

HABITAT.—Colorado.

The type is in the British Museum.

A. schœnherri Zett.*

1840. Zett., Ins. Lapp., 950, *Anarta.*
1861. Stgr., Stett. Ent. Zeit., 1861, 373, *Anarta.*
leucocycla Stgr.
1857. Stgr., Stett. Ent. Zeit., 1857, 296, *Anarta.*
1860. Moeschl., Wien. Ent. Monatsch., IV, 367, pl. IX, f. 6, *Sympistis.*
1861. Stgr., Stett. Ent. Zeit., 1861, 373, pr. syn.

HABITAT.—Labrador; Greenland; Lapland.

The Staudinger type is in his own collection. Perhaps it may be well to state that in my citations in this genus, in which so many species are circumpolar, I have not attempted to refer to well established European synonymy, nor to give references to all works in which the European insects are treated. I have tried only to credit the species and to give reference to the works more usually accessible to American students, following Staudinger in the bibliography.

A. richardsoni Curt.*

1834. Curt., App. to Ross, Narr. 2nd Voy., 72, pl. A, f. 11, *Hadena.*
1857. Wlk., C. B. Mus., Het., XI, 706, *Anarta.*
1867. Pack., Proc. Bost. Soc. N. H., XI, 39, *Anarta.*
algida Lef.
1836. Lef., Ann. Soc. Ent. Fr., V, 395, pl. X, f. 5, *Anarta.*
1852. Gn., Spec. Gen., Noct., II, 192, *Anarta.*
1857. Wlk., C. B. Mus., Het., XI, 699, *Anarta.*
1860. Moeschl., Wien. Ent. Monatsch., IV, 367, *Anarta.*
1871. Stgr., Cat. Lep. Eur., 128, pr. syn.
septentrionis Wlk.
1857. Wlk., C. B. Mus., Het., XI, 700, *Anarta.*
1891. Butler, Entomologist, XXIV, 293, pr. syn.

HABITAT.—Labrador in August; Repulse Bay; Lapland; Polaris Bay.

Walker's type is in the British Museum, and is the same as the *richardsonii* of the Grote and other collections.

A. secedens Wlk.

1857. Wlk., C. B. Mus., Het., XII, 913, *Plusia*.

HABITAT.—Hudson's Bay territory.

The type is in the British Museum. It is a yellow winged *Anarta* in poor condition, and seems different from anything else in the collection. On the primaries the narrow, irregular, dentate, white s. t. line is followed by dark spots, and on the secondaries the outer black band is not defined.

A. impingens Wlk.*

1857. Wlk., C. B. Mus., Het., XI, 700, *Anarta*.
nivaria Grt.
1875. Grt., Ann. Lyc. Nat. Hist. N. Y., XI, 107, *Anarta*.
1880. Grt., Bull. Bkln. Ent. Soc., III, 38, = *curta*.
curta Morr.
1875. Morr., Ann. Lyc. Nat. Hist. N. Y., XI, 96, *Mamestra*.
1880. Grt., Bull. Bkln. Ent. Soc., III, 38, *Anarta*.
1880. Grt., Can. Ent., XII, 186, = *nivaria*.
1881. Grt., Can. Ent., XIII, 126, *Anarta*.
perpura Morr.
1875. Morr., Proc. Ac. Nat. Sci., Phil., 1875, 66, *Orthosia*.
1880. Grt., Bull. Bkln. Ent. Soc., III, 38, = *curta*.
1880. Grt., Can. Ent., XII, 186, = *nivaria*.

HABITAT.—Colorado in July; "Rocky Mts."

Walker's type is in the British Museum; Mr. Grote's type I have not seen; Morrison's types are both in the Tepper collection. The locality, New York, given by Mr. Morrison for *O. perpura*, is certainly an error. Mr. Butler, from the specimens before him, suggests (Entomologist, XXIV, 293) that *impingens* is near to *nivaria*, but from my knowledge of other specimens I made the reference positively before Mr. Butler's note appeared.

A. membranosa Morr.

1875. Morr., Ann. Lyc. Nat. Hist. N. Y., XI, 101, *Anarta*.

HABITAT.—White Mts., New Hampshire.

Mr. Morrison's type is probably in the Museum of the Boston Society of Natural History; but I have no memorandum of having seen it there.

A. lapponica Thunb.

1792. Thunb., Diss. Ent., II, 42, f. 10, *Noctua*.
1861. Stgr., Stett. Ent. Zeit., 1861, 381, *Anarta*.
amissa Lefb.
1836. Lefb., Ann. Soc. Ent. Fr., V, 397, pl. X, f. 6, *Anarta*.
1852. Gn., Spec. Gen., Noct., II, 192, *Anarta*.
1857. Wlk., C. B. Mus., Het., XI, 698, *Anarta*.
1860. Moeschl., Wien. Ent. Monatschr., IV, 367, *Anarta*.
1861. Stgr., Stett. Ent. Zeit., 1861, 381, pr. syn.

HABITAT.—Greenland; Labrador.

A. kelloggi Hy. Edw.

1875. Hy. Edw., Proc. Cal. Ac. Sci., VI, 133, *Anarta.*

HABITAT.—Tuolumne Co., California.

The type is in the Edwards collection.

A. zetterstedtii Stgr.*

1857. Stgr., Stett. Ent. Zeit., 1857, 294, *Anarta.*
1860. H. Sch., Neue Schmett. Eur., f. 166. *Anarta.*
1874. Moeschl., Stett. Ent. Zeit., 1874, 317, *Anarta.*

HABITAT.—Labrador; Lapland.

The type is with Dr. Staudinger.

A quieta Hbn.

1805. Hbn., Schmett. Eur., Noct., 485, *Noctua.*
1852. Gn., Spec. Gen., Noct., II, 193, pl. VII, f. 11, *Anarta.*
1857. Wlk., C. B. Mus., Het., XI, 701, *Anarta.*
1861. Stgr., Stett. Ent. Zeit., 1861, 378, *Anarta.*
constricta Wlk.
1857. Wlk., C. B. Mus., Het., XI, 701, *Anarta.*
1891. Butler, Entomologist, XXIV, 293, pr. syn.
rigida Wlk.
1857. Wlk., C. B. Mus., Het., XI, 701, *Anarta.*
1891. Butler, Entomologist, XXIV, 293, pr. syn.

HABITAT.—Arctic coast of America. Lat. 67½–68.

Walker's types are in the British Museum and Mr. Butler's references to *quieta* agree with my own notes.

A. funebris Hbn.

1801. Hbn., Schmett. Eur., Noct., pl. 92, f. 433, *Noctua.*
1825. Tr., Schmett. Eur., V, 209, *Anarta.*
1852. Gn., Spec. Gen., Noct., II, 191, *Anarta.*
1857. Wlk., C. B. Mus., Het., XI, 698, *Anarta.*
1860. Moeschl., Wien. Ent. Monatschr., IV, 370. *Sympistis.*

HABITAT.—Labrador.

It is perhaps a little questionable whether Moeschler's specimens are really the European species. I have not seen them.

A. mimula Grt.

1883. Grt., Trans. Kans. Ac. Sci., VIII, 18, *Mamestra.*

HABITAT.—New Mexico.

The type is with Prof. Snow, to whose courtesy I owe the chance to examine the species and to make the above generic reference.

A. mimuli Behr.

1885. Behr, Bull. Cal. Ac. Sci., 1885, 62, *Anarta.*

HABITAT.—California.

I presume Dr. Behr has his type. I have not tried to identify the species.

Genus **ANNAPHILA** Grt.

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 149.

A. diva Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 150, pl. IV, f. 14, *Annaphila.*

HABITAT.—California.

The type is in the British Museum.

A. casta Hy. Edw.

1890. Hy. Edw., Ento. Amer., IV, 114, *Annaphila.*

HABITAT.—Oregon.

The type is in the British Museum.

A. superba Hy. Edw.

1875. Hy. Edw., Proc. Cal. Ac. Sci., VI, 139, *Annaphila.*
1882. Grt., Ill. Essay, 60, pl. III, f. 28, *Annaphila.*

HABITAT.—California.

The type is in the Edwards collection; good specimens are also in the British Museum collection.

A. divinula Grt.

1878. Grt., Bull. Geol. Surv., IV, 183. *Annaphila.*

HABITAT.—California.

The type is in the British Museum.

A. germana Hy. Edw.

1875. Hy. Edw., Proc. Cal. Ac. Sci., VI, 138, *Annaphila.*

HABITAT.—California.

The type is in the Edwards collection. Mr. Edwards suggested that this might be a variety of *amicula* (*decia*), but though it resembles that species closely it seems to be distinct.

A. decia Grt.*

1875. Grt., Can. Ent., VII, 47, *Annaphila.*
amicula Hy. Edw.
1875. Hy. Edw., Proc. Cal. Ac. Sci., VI, 137, *Annaphila.*
1878. Grt., Bull. Geol. Surv., IV, 183, *Annaphila.*

HABITAT.—California.

Mr. Grote's type is in the British Museum; that of Mr. Edwards is in his own collection.

A. depicta Grt.

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 150, pl. IV, f. 13, *Annaphila.*

HABITAT.—California.

Types are in the British Museum and in the Edwards collection.

A. salicis Hy. Edw.

1881. Hy. Edw., Papilio, I, 23, *Annaphila.*
arvalis Hy. Edw.
1875. Hy. Edw., Proc. Cal. Ac. Sci., VII, 136, *Annaphila.*
1881. Hy. Edw., Papilio, I, 23, *nomen bis lectum.*

HABITAT.—Sierra Nevada, California.

Types are in the Edwards collection, and there is also a specimen marked "type" in the British Museum.

A. lithosina Hy. Edw.

1875. Hy. Edw., Proc. Cal. Ac. Sci., VI, 137, *Annaphila.*

HABITAT.—California.

The type is in the Edwards collection. This collection by the bye contains type specimens of nearly all the species as Mr. Edwards furnished most of the material from which Mr. Grote described.

A. mera Harv.

1875. Harv., Bull. Buff. Soc. Nat. Sci., II, 277, *Annaphila.*

HABITAT.—California.

The type is in the British Museum.

A. immerens Harv.

1875. Harv., Can. Ent., VII, 160, *Annaphila*

HABITAT.—California.

The type is in the British Museum.

A. danistica Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 151, pl. IV, f. 7, *Annaphila.*

HABITAT.—Nevada; California.

The type is in the British Museum.

A. pustulata Hy. Edw.

1881. Hy. Edw., Papilio, I, 23, *Annaphila.*

HABITAT.—Arizona.

The type is in the Edwards collection.

A. domina Hy. Edw.

1875. Hy. Edw., Proc. Col. Ac. Sci., VI, 138, *Annaphila.*

HABITAT.—California.

The type is in the Edwards collection.

A. aurantiaca Hy. Edw.*

1881. Hy. Edw., Papilio, I, 23, *Annaphila.*

HABITAT.—California.

The type is in the Edwards collection. It is not an *Annaphila*, but a Heliothid, for which I have not found the best place as yet. There are several small forms in collections as yet undescribed.

Genus **TRICHOTARACHE** Grt.

1875. Grt., Can. Ent., VII, 48.

T. assimilis Grt.

1875. Grt., Can. Ent., VII, 48, *Trichotarache.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 166, *Trichotarache.*

HABITAT.—California.

The type is in the British Museum.

Genus **ACONTIA** Ochs.

1816. Ochs., Schmett. Eur., IV, 91.

A. flavipennis Grt

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 153, *Tarache.*

HABITAT.—Oregon; California; Sierra Nevada.

The type is in the Edwards collection.

A. aprica Hbn.*

1803. Hbn., Schmett. Eur., Noct., f. 371, *Noctua.*
1816. Hbn., Verzeichniss, 261, *Tarache.*
1829. Steph., Ill. Brit. Ent., Haust., III, 113, *Acontia.*
1852. Gn., Spec. Gen., Noct., II, 219, *Acontia.*
1857. Wlk., C. B. Mus., Het., XII, 785, *Acontia.*
1868. H. Sch., Corr.-Blatt, 1868, Cuba, p. 10, *Acontia.*
1874. Morr., Proc. Bost. Soc. Nat. Hist., XVII, 212, *Tarache.*
1885. Gundlach, Cont. Ent. Cuba., 312, *Acontia.*
var. **biplaga** Gn.*
1852. Gn., Spec. Gen., Noct., II, 218, *Acontia.*
1857. Wlk., C. B. Mus., Het., XII, 785, *Acontia.*
1868. G. & R., Trans. Am. Ent. Soc., II, 78, pr. var.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 36, pr. var.

HABITAT.—Southern States; Texas; Colorado; Missouri in October.

What seems to be a typical specimen, labeled by Guenée, is in the British Museum. Mr. Butler, in the Entomologist, XXV, 63, 1892, cites *Acontia unocula* Freyer, neuere Beitraege, VI, tab. 534, f. 3, as an additional synonym, perhaps correctly. He also, incorrectly, makes *biplaga* the female of *aprica.* Both sexes of both forms are found.

A. abdominalis Grt.

1877. Grt., Can. Ent., IX, 157, *Tarache.*

HABITAT.—Texas, March, May, and September; Kansas in May.

A type is in the British Museum, from the Grote collection; another, from the Meske collection, is in the National Museum.

A. expolita Grt.

1882. Grt., Papilio, II, 131, *Tarache.*

HABITAT.—Arizona.

The type is in the Neumœgen collection.

A. lanceolata Grt.

1879. Grt., Can. Ent., XI, 198, *Tarache*.

HABITAT.—Texas.

The type is in the British Museum.

A. angustipennis Grt.*

1875. Grt., Proc. Ac. Nat. Sci. Phil., 1875, 426, *Tarache*.

HABITAT.—Texas in May; Colorado in August; California; New Mexico.

The type is in the British Museum.

A. sutrix Grt.

1880. Grt., Can. Ent., XII, 154, *Tarache*.

HABITAT.—Colorado; Nevada; New Mexico.

A type is in the British Museum.

A. tenuicola Morr.*

1874. Morr., Proc. Bost. Soc. N. H., XVII, 218, *Tarache*.

HABITAT.—Texas in April.

Types are in the Cambridge collection and with Mr. Neumœgen. The species closely approaches some forms of *candefacta*, but lacks all yellow markings.

A. erastroides Gn.*

1852. Gn., Spec. Gen., Noct., II, 218, *Acontia*.
1857. Wlk., C. B. Mus., Het., XII, 784, *Acontia*.
1868. G. & R., Trans. Am. Ent. Soc., II, 78, *Tarache*.
1881. Coquillett, Papilio, I, 8, *larva*.
1883. Coquillett, Papilio, III, 84, *larva*.

HABITAT.—Canada; Eastern and Middle States, June and August.

The type is in the British Museum; others are in the Guenée collection with M. Oberthür.

A. candefacta Hbn.*

1823. Hbn., Zutraege, III, ff. 587, 588, *Tarache*.
1852. Gn., Spec. Gen., Noct., II, 216, *Acontia*.
1857. Wlk., C. B. Mus., Het., XII, 784, *Acontia*.
1880. Grt., Can. Ent., XII, 118, *Tarache*.
1883. Coquillett, Papilio, III, 84, *larva*.
minuta Haw.
1810. Haw., Lep. Britt., 265, *Phytometra*.
1857. Wlk., C. B. Mus., Het., XII, 784, pr. syn.
debilis Wlk.
1857. Wlk., C. B. Mus., Het., XII, 786, *Acontia*.
1868. G. & R., Trans. Am. Ent. Soc., II, 78, pr. syn.

HABITAT.—United States east of the Rocky Mountains; Colorado; Canada, May, June, and September; Kansas in July; Texas in April and August.

Walker's type is in the British Museum and is the normal form of our common species. In citing *minuta* Haw., in the synonymy, I follow Walker without verification and merely to suggest inquiry. If the reference prove correct, Hübner's name must be superseded.

A. arizonæ Hy. Edw.*

1878. Hy. Edw., Pacific Coast Lep., No. 29, 7, *Thalpochares*.
1880. Grt., Can. Ent., XII, 58, *Thalpochares*.
1882. Grt., New List, 37, *Tarache*.

HABITAT.—Arizona; California.

The types are in the Edwards collection.

A. sedata Hy. Edw.

1881. Hy. Edw., Papilio, I, 23, *Tarache*.

HABITAT.—Arizona.

The type is in the Edwards collection.

A. elegantula Harv.*

1876. Harv., Can. Ent., VIII, 55, *Thalpochares*.
1880. Grt., Can. Ent., XII, 58, *Thalpochares*.
1882. Grt., New List, 37, *Tarache*.
semiopaca Grt.
1878. Grt., Bull. Geol. Surv., IV, 182, *Tarache*.
1882. Grt., New List, 37, pr. syn.
seminivealis Hulst.
1886. Hulst, Trans. Am. Ent. Soc., XIII, 157, *Orobæna*.

HABITAT.—Arizona; Nevada; Montana in June; Colorado.

Dr. Harvey's type is in the Edwards collection; Mr. Grote's type is in the British Museum, while Dr. Hulst's type is now in the Rutgers College collection.

A. binocula Grt.*

1875. Grt., Can. Ent., VII, 224, *Tarache*.
virginalis Grt.
1881. Grt., Can. Ent., XIII, 15, pr. var.
1881. Grt., Papilio, I, 155, ? pr. var.

HABITAT.—Arizona; Texas in May; Kansas in July.

Types of both species are in the British Museum.

A. cretata G. & R.*

1868. G. & R., Trans. Am. Ent. Soc., III, 181, pl. II, p. 78, *Tarache*.

HABITAT.—Texas in August; Colorado.

The type is in the collection of the American Entomological Society.

A. lactipennis Harv.*

1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 10, pl. II, f. 3, *Tarache*.
1875. Harv., Can. Ent., VII, 135, *Tarache*.

HABITAT.—Texas, April to June.

The type is in the British Museum.

A. delecta Wlk.*

1857. Wlk., C. B. Mus., Het., XII, 799, *Acontia.*
1868. G. & R., Trans. Amer. Ent. Soc., II, 78, *Tarache.*
1874. Morr., Proc. Bost. Soc. N. H., XVII, 212, *Tarache.*
1888. Weeks, Ent. Amer., IV, 16, larva.
1892. Beut., Bull. Am. Mus. N. H., IV, 68, larva.
metallica Grt.
1865. Grt., Proc. Ent. Soc. Phil., IV, 327, pl. II, f. 7, *Acontia.*
1868. G. & R., Trans. Am. Ent. Soc., II, 78, pr. syn.

HABITAT.—New Jersey, southward to Florida and Texas (in May).

Walker's type is in the British Museum; that of Mr. Grote's is in the Collection of the American Entomological Society. This species is readily known by its large size and color resemblance to *Eudryas.*

A. terminimaculata Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 153, *Tarache.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 162, *Tarache.*

HABITAT.—New York; Massachusetts; Illinois in August.

The type is with Dr. Lintner.

A. ardoris Hbn.

1823. Hbn., Zutraege zur Samml. Ex. Schmett., III, 31, f. 551, 552, *Tarache.*
1852. Gn., Spec. Gen., Noct., II, 219, *Acontia.*
1857. Wlk., C. B. Mus., Het., XII, 758, *Acontia.*
1880. Grt., Can. Ent., XII, 118, *Tarache,* ? an American.

HABITAT.—"Georgia." ?

In the Museum at Paris is a specimen from South America, identified by Guenée. The species has the maculation of *candefacta,* but is darker in color and narrower winged. I do not remember any similar specimens in American collections.

Genus **CHAMYRIS** Gn.

1852. Gn., Spec. Gen., Noct., II, 225.

C. cerintha Tr.*

1825. Tr., Schmett. Eur., V, 240, *Acontia.*
1829. Bdv., Ind. Meth., 165, *Acontia.*
1845. H. Sch., Schmett. Eur., II, pl. 86, f. 116, *Acontia.*
1852. Gn., Spec. Gen., Noct., II, 225, *Chamyris.*
1857. Wlk., C. B. Mus., Het., XII, 803, *Chamyris.*
1874. Lint., Ent. Cont., III, 163, *Chamyris.*
1881. Coquillett, Papilio, I, 56, larva on apple.
1892. Edw. & Elliott, Bull. Am. Mus. N. H., IV, 78, larva.

HABITAT.—Canada; Eastern, Middle, Southern, and Central States; New York in May and July; Canada in June; Massachusetts in June and July; Kansas in May.

Erroneously described by Treitschke as a European species.

Genus **AZENIA** Grt.

1882. Grt., Papilio, II, 186.

A. implora Grt.

1882. Grt., Papilio, II, 186, *Azenia.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 166, 175, *Azenia.*
1890. Grt., Ent. Amer., VI, 162, *Azenia.*

HABITAT.—Arizona.

A. edentata Grt.

1883. Grt., Can. Ent., XV, 25. *Azenia.*
1890. Grt., Ent., Amer., VI, 162, *Azenia.*

HABITAT.—Arizona.

Types of both the above species are in the Neumœgen collection.

Genus **ESCARIA** Grt.

1882. Grt., Papilio, II, 186.

E. clauda Grt.*

1882. Grt., Papilio, II, 186, *Escaria.*
1890. Grt., Ent. Amer., VI, 163, *Escaria.*

HABITAT.—Arizona.

Types are in the Neumœgen collection and in the National Museum.

Genus **FRUVA** Grt.

1877. Grt., Can. Ent., IX, 69.

F. fasciatella Grt.*

1875. Grt., Can. Ent., VII, 225, *Spragueia.*
1879. Grt., Can. Ent., XI, 234, *Fruva.*
obsoleta Grt.
1877. Grt., Can. Ent., IX, 69, *Fruva.*
1879. Grt., Can. Ent., XI, 235, *Fruva.*

HABITAT.—Illinois; Texas; Iowa.

The types of both names are in the British Museum, and both refer to one species. It is merely a question of completeness of maculation and not much difference at that.

F. acerba Hy. Edw.

1881. Hy. Edw., Papilio, I, 24, *Fruva.*

HABITAT.—California.

The type is in the Edwards collection.

F. modesta Hy. Edw.

1881. Hy. Edw., Papilio, IV, 124, *Fruva.*

HABITAT.—Virginia City, Nevada.

The type is in the Edwards collection.

F. apicella Grt.*

1872. Grt., Trans. Am. Ent. Soc., IV, 21, *Emmelia.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 37, *Erotyla.*
1879. Grt., Can. Ent., XI, 237, *Spragueia.*

1882. Grt., New List, 38, *Frura.*
♀ *truncatella* Zell.
1873. Zell, Verh. k. k. zoöl. bot. Ges., XXIII, 3, t. 3, f. I, *Agrophila.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 199, pr. syn.
♂ ♀ *accepta* Hy. Edw.
1881. Hy. Edw., Papilio, I, 24, *Frura.*
1882. Grt., New List, 38, pr. syn.

HABITAT.—Southern States; Texas.

The Grote type is in the collection of the American Entomological Society; Mr. Edwards's types are in his collection; the Zeller type is in the Cambridge collection.

F. parvula Wlk.

1865. Wlk., C. B. Mus., Het., XXXIII, 779, *Xanthodes.*
georgica Grt.
1881. Grt., Can. Ent., XIII, 232, *Frura.*

HABITAT.—Arizona.

Both the types are in the British Museum. and unquestionably refer to the same species. Walker's species is from "locality unknown."

F. deleta Hy. Edw.

1884. Hy. Edw., Papilio, IV, 124, *Frura.*

HABITAT.—Virginia City, Nevada; Hudson's Bay Territory.

Types are in the Edwards and Neumœgen collections.

Genus **XANTHOPTERA** Gn.

1852. Gn., Spec. Gen., Noct., II, 240.

X. nigrofimbria Gn.*

1852. Gn., Spec. Gen., Noct., II, 241, pl. 10, f. 12, *Xanthoptera.*
1857. Wlk., C. B. Mus., Het., XII, 819, *Xanthoptera.*
1879. Grt., Can. Ent., XI, 235, *Xanthoptera.*

HABITAT.—New York to Texas; Central States; Missouri and Texas in August; District of Columbia in June.

The type is probably with M. Oberthür at Rennes.

X. clausula Grt.

1882. Grt., Papilio, II, 186, *Xanthoptera.*

HABITAT.—Arizona.

The type is in the Neumœgen collection.

X. semiflava Gn.*

1852. Gn., Spec. Gen., Noct., II, 241, *Xanthoptera.*
1857. Wlk., C. B. Mus., Het., XII, 818, *Xanthoptera.*
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 221, *Prothymia.*
1879. Grt., Can. Ent., XI, 235, *Xanthoptera.*

HABITAT.—Southern States; Texas.

The type is probably at Rennes with M. Oberthür; a specimen, apparently labeled by Guenée, is in the British Museum.

X. subcitrinalis Hulst.

1886. Hulst, Trans. Am. Ent. Soc., XIII, 157, *Orobæna.*
1891. Smith, List Lepidoptera, 56, *Xanthoptera.*

HABITAT.—Arizona.

The type is in the Rutgers College collection. From superficial characters the species belongs here. I have not tried to compare it with described forms; but it is none of those represented in the British Museum.

Genus **SPRAGUEIA** Grt.

1875. Grt., Check List Noctuidæ, 25.

S. onagrus Gn.*

1852. Gn., Spec. Gen., Noct., II, 205, pl. X, f. 2, *Agrophila.*
1857. Wlk., C. B. Mus., Het., XII, 774, *Agrophila.*
1858. H. Sch. Lep. Ex., f. 209, *Agrophila.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 37, an var. *leo; Erotyla.*
1879. Grt., Can. Ent., XI, 232, an spec. dist.

HABITAT.—Southern States; Florida; Texas.

The type is in the Boisduval collection, now with M. Oberthür, at Rennes. In the British Museum there is a specimen apparently named by Guenée, but not the type. It is like the species labeled *onagrus* in our collections.

S. leo Gn.*

1852. Gn., Spec. Gen., Noct., II, 205, *Agrophila.*
1857. Wlk., C. B. Mus., Het., XII, 773, *Agrophila.*
1879. Grt., Can. Ent., XI, 231, *Spragueia.*

HABITAT.—With the preceding.

The type is also from the Boisduval collection now with M. Oberthür. In the British Museum there is a specimen apparently labeled by Guenée, and this is undoubtedly a variety of the preceding. Mr. Grote cites Herrich-Schæffer's figure of *onagrus* in error to this species; but I am not sure if he is correct. At all events further study is required to settle the matter.

S. magnifica Grt.

1882. Grt., Papilio, II, 183, *Spragueia.*

HABITAT.—Arizona.

The type is in Mr. Neumœgen's collection.

S. plumbifimbriata Grt.*

1877. Grt., Can. Ent., IX, 68, *Spragueia.*
1879. Grt., Can. Ent., XI, 233, *Spragueia.*

HABITAT.—Texas in April, May, and July.

The type is in the British Museum.

S. obatra Morr.

1875. Morr., Proc. Bost. Soc. N. H., XVIII, 124, *Tarache.*
1880. Grt., Can. Ent., XII, 186, *Spraguecia.*

HABITAT.—Southern States; Louisiana.

The type is in the Tepper collection.

S. dama Gn.*

1852. Gn., Spec. Gen., Noct., II, 205, *Agrophila.*
1857. Wlk., C. B. Mus., Het., XII, 773, *Agrophila.*
1868. H. Sch., Corr. Blatt, 1868, Cuba, 11, *Emmelia.*
1879. Grt., Can. Ent., XI, 233, *Spraguecia.*
1885. Gundlach, Cont. Ent. Cub., 313, *Emmelia.*
trifariana Wlk.
1865. Wlk., C. B. Mus., Het., XXXIII, 777, *Agrophila.*

HABITAT.—Southern States; Florida; Texas; Cuba.

Guenée's type is with M. Oberthür. Walker's type is in the British Museum and is like the specimens named *dama* in the Grote collection. I believe Mr. Grote's identification to be correct, and therefore cite Mr. Walker's species in the synonymy; it is from "locality unknown."

S. transmutata Wlk.

1865. Wlk., C. B. Mus., Het., XXXIII, 776, *Agrophila.*
pardalis Grt.
1881. Grt., Papilio, I, 50, *Spraguecia.*

HABITAT.—Florida; St. Domingo.

Both the Grote and Walker types are in the British Museum, and they undoubtedly refer to the same species.

S. funeralis Grt.*

1881. Grt., Papilio, I, 158, *Spraguecia.*
1882. Grt., Ill. Essay, 61, pl. 3, f. 30, *Spraguecia.*

HABITAT.—Arizona.

Types are in the British Museum and in the National Museum.

S. sordida Grt.*

1882. Grt., Can. Ent., XIV, 217, *Spraguecia.*

HABITAT.—Texas.

The type, given me by Mr. Grote, is now in the National Museum.

S. guttata Grt.*

1875. Grt., Can. Ent., VII, 224, *Spraguecia.*
1879. Grt., Can. Ent., XI, 231, *Spraguecia.*

HABITAT.—Texas.

The type is in the British Museum.

S. tortricina Zell.*

1872. Zell., Ver. k. k. Zoöl. bot. Ges., XXII, 461, pl. II, f. 5, *Agrophila.*
1879. Grt., Can. Ent., XI, 233, *Spragueia.*
inorata Grt.
1882. Grt., Papilio, II, 183, *Spragueia.*
1891. Smith, List Lepid., 56, pr. syn.

HABITAT.—Texas in March and May; Kansas in July.

Zeller's type is in the Museum at Cambridge; Mr. Grote's type is in the Neumœgen collection. The two are the same, specifically. By an unfortunate oversight the synonymy in my list is reversed and *tortricina* stands as a synonym of *inorata* instead of *vice versa.*

Genus **EXYRA** Grt.

1875. Grt., Check List Noct., 26.

E. semicrocea Gn.*

1852. Gn., Spec. Gen., Noct., II, 241, *Xanthoptera.*
1857. Wlk., C. B. Mus., Het., XII, 818, *Xanthoptera.*
1874. Riley, Can. Ent., VI, 208, figs.; life history.
1874. Riley, Trans. St. L. Ac. Sci., III, 236, fig.; life hist.
1879. Grt., Can. Ent., XI, 236, *Exyra.*

HABITAT.—Middle, Central, and Southern States.

The name has no type, since Guenée described from a figure by Abbot, and had no autoptic acquaintance with the insect. There is no reasonable doubt however of the identification.

E. ridingsii Riley.*

1874. Riley, Trans. St. Louis Ac. Sci., III, 240, *Xanthoptera.*
1879. Grt. Can. Ent., XI, 236, *Exyra.*
nigrocaput Morr.
1874. Morr., Proc. Bost. Soc. N. H., XVII, 153, *Xanthoptera.*
1875. Grt., Can. Ent., VII, 17, pr. syn.
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 211, pr. syn.

HABITAT.—Central and Southern States; Texas.

Dr. Riley's type is in the National Museum. I do not know where Mr. Morrison's type now is.

E. fax Grt.

1873. Grt., Trans. Am. Ent. Soc., IV, 295, *Xanthoptera.*
1879. Grt., Can. Ent., XI, 236, *Exyra.*

HABITAT.—Southern States; Delaware in September.

I do not know where the type is at present.

E. rolandiana Grt.*

1877. Grt., Psyche, II, 38, *Exyra.*
1877. Thaxter, Psyche, II, 39, larva.
1882. Grt., Ill. Essay, 64, pl. 3, f. 35, *Exyra.*

HABITAT.—Massachusetts, May and June; Eastern, Middle, and Central States.

The type is in the British Museum.

Genus **PROTHYMIA** Hbn.

1816. Hbn., Verzeichniss, 282.
1890. Grt., Ent. Amer., VI. 163.

P. rhodarialis Wlk.*

1859. Wlk., C. B. Mus., Het., XIX, 860, *Herminia.*
1865. Wlk., C. B. Mus., Het., XXXIV, 1204, *Marimatha.*
coccineifascia Grt.
1873. Grt., Trans. Am. Ent. Soc., IV, 294, pl. I, f. 89, *Xanthoptera.*
1874. Morr., Proc. Bost. Soc. N. H., XVII, 154, *Prothymia.*
1879. Grt., Can. Ent., XI, 236, *Prothymia.*
1883. Grt., Proc. Am. Phil. Soc., XXI, 167, *Prothymia.*

HABITAT.—Massachusetts to Texas; Florida in March; Texas, May to August.

Both the types are in the British Museum and refer to one species only. Walker's specimens are from "locality unknown."

P. semipurpurea Wlk.*

1865. Wlk., C. B. Mus., Het., XXXIII, 803, *Anthophila.*
confinisalis Wlk.
1865. Wlk., C. B. Mus., Het., XXXIV, 1206, *Marimatha.*
rosalba Grt.
1873. Grt., Trans. Am. Ent. Soc., IV, 295, pl. I, f. 88, *Xanthoptera.*
1874. Morr., Proc. Bost. Soc. Nat. Hist., XVII, 154, *Prothymia.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 22, *Prothymia.*
1879. Grt., Can. Ent., XI, 238, *Prothymia.*

HABITAT.—Massachusetts in May, to Texas in June and July; Central States.

The types are all in the British Museum, and all refer to one species. Mr. Walker's material is all from "locality unknown."

P. plana Grt.

1882. Grt., Papilio, II, 184, *Prothymia.*

HABITAT.—Arizona.

The type is in the Neumœgen collection.

P. orgyiæ Grt.*

1875. Grt., Trans. Am. Ent. Soc., V, 116, *Prothymia.*
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 311, *Prothymia.*
1879. Grt., Can. Ent., XI, 236, *Prothymia.*
subolivacea, Harv.
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 11, *Prothymia.*
1879. Grt., Can. Ent., XI, 236, pr. syn.

HABITAT.—Texas in March, May, July, and September.

Both the types are in the British Museum and refer to one species only.

Genus **METATHORASA** Moore.

1881. Moore, Proc. Zool. Soc., 374.

M. argentilinea Wlk.

1857. Wlk., C. B. Mus., Het., XII, 863, *Callopistria.*
1882. Grt., New List, 38, *Herrichia.*
1882. Grt., Papilio, II, 122, *Euherrichia.*
1891. Butler, Ann. Mag. Nat. Hist., 1891, 72, *Metathorasa.*

HABITAT.—Middle, Southern, and Central States.

The type is in the British Museum.

M. monetifera Gn.*

1852. Gn., Spec. Gen., Noct., II, 295, pl. XIV, f. 4, *Eriopus.*
1857. Wlk., C. B. Mus., Het., XII, 863, *Callopistria.*
1882. Grt., New List, 38, *Herrichia.*
1882. Grt., Papilio, II, 122, *Euherrichia.*
1890. Grt., Ent. Amer., VI, 163, *Euherrichia.*
1891. Butler, Ann. Mag. Nat. Hist., 1891, 73, *Metathorasa.*

HABITAT.—Nova Scotia; Canada; Northern, Eastern, and Southern States; New York in June and July; New Jersey; Florida.

The species was described from the Saunders collection, and the type is probably at Oxford.

Genus **EUHERRICHIA** Grt.

1882. Grt., Papilio, II, 122.
1890. Grt., Ent. Amer., VI, 163.

E. mollissima Gn.*

1852. Gn., Spec. Gen., Noct., II, 294, *Eriopus.*
1857. Wlk., C. B. Mus., Het., XII, 863, *Callopistria.*
1882. Grt., New List, 38, *Herrichia.*
1882. Grt., Papilio, II, 122, *Euherrichia.*
1891. Butler, Ann. Mag. Nat. Hist., 1891, 73, *Haploolophus.*
rubicunda Wlk.
1857. Wlk., C. B. Mus., Het., XII, 808, *Erastria.*
1868. G. & R., Trans. Am. Ent. Soc., II, 79, pr. syn.

HABITAT.—Canada to Florida; Colorado, June and August.

The types of both names are in the British Museum and have been correctly united by Messrs. Grote and Robinson.

E. granitosa Gn.*

1852. Gn., Spec. Gen., Noct., II, 295, *Eriopus.*
1857. Wlk., C. B. Mus., Het., XII, 863, *Callopistria.*
1875. Grt., Proc. Bost. Soc. N. H., XVIII, 415, *Eriopus.*
1882. Grt., New List, 38, *Herrichia.*
1882. Grt., Papilio, II, 122, *Euherrichia.*

HABITAT.—Southern States; Florida.

The type is in the Boisduval collection with M. Oberthür.

E. cervina Hy. Edw.

1890. Hy. Edw., Ent. Amer., VI, 114, *Herrichia.*

HABITAT.—Mount Shasta district, California; Colorado.

Genus **CALLOPISTRIA** Hbn.

1816. Hbn., Verzeichniss, 216.

C. floridensis Gn.

1852. Gn., Spec. Gen., Noct., II, 192, *Eriopus.*
1857. Wlk., C. B. Mus., Het., XII, 862, *Callopistria.*
1882. Grt., Papilio, II, 122, *Euherrichia.*
1891. Butler, Ann. Mag. Nat. Hist., 1891, 75, *Callopistria.*

HABITAT.—Florida.

The type is in the British Museum.

C. strena Grt.

In Ent. Amer., VI, 164, 1890, Mr. Grote speaks of this species as "described," but without saying where. I have been unable to find any description or any reference in the Record or Yahresbericht. Yet I may have overlooked it, and cite the species with the explanation and no references. The types are with Mr. Neumœgen.

Genus **LITHACODIA** Hbn.

1816. Hbn., Verzeichniss, 205.

L. bellicula Hbn.*

1818. Hbn., Zutraege zur Samml, Ex. Schmett., 18, f. 85, 86, *Lithacodia.*
1857. Wlk., C. B. Mus., Het., XI, 583, *Hadena.*
1880. Grt., Can. Ent., XII, 86, *Lithacodia.*
semichalcea Wlk.
1865. Wlk., C. B. Mus., Het., XXXIII, 797, *Hydrelia.*
1892. Butler, Entomologist, XXV, 65, pr. syn.

HABITAT.—Nova Scotia to Florida and Texas; Central States, June to August; Colorado.

Walker's type is in the British Museum and is the well-known Hübnerian species.

Genus **ERASTRIA** Ochs.

1816. Ochs., Schmett. Eur., IV, 92.

Eustrotia Hbn., bears date the same year, but was certainly not published until 1818 at least. Mr. Grote gives an enumeration of some of the species, Ent. Amer., VI, 164, 1890.

E. malaca Grt.

1873. Grt., Trans. Am. Ent. Soc., IV, 296, *Erastria.*
1881. Grt., Papilio, I, 11, *Eustrotia.*

HABITAT.—Pennsylvania.

The type is in the British Museum. It has no head, no legs, and only half a thorax. It seems a good species, however, which I had not before seen.

E. albidula Gn.*

1852. Gn., Spec. Gen., Noct., II, 230, *Erastria.*
1857. Wlk., C. B. Mus., Het., XII, 807, *Erastria.*

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 37, *Eustrotia.*
intractabilis Wlk.
1860. Wlk., Can. Nat. and Geol., V, 252, *Nonagria.*
1877. Grt., Can. Ent., IX, 28, pr. syn.

HABITAT.—Middle and Central States, June and July.

Guenee's type should be in the British Museum, but I did not see it there. Walker's type is in the collection of the Entomological Society of Ontario and was examined by Mr. Grote, who gives the above reference.

E. secta Grt.

1879. Grt., Can. Ent., XI, 199, *Eustrotia.*
1880. Grt., Can. Ent., XII, 50, *Eustrotia.*

HABITAT.—Massachusetts.

The type is with Dr. Thaxter.

E. flaviguttata Grt.

1882. Grt., Can. Ent., XIV, 187, *Eustrotia.*

HABITAT.—Texas.

Described by Mr. Grote from his own collection. The type is with Mr. Neumœgen.

E. concinnimacula Gn.*

1852. Gn., Spec. Gen., Noct., II, 238, pl. x, f. 10, *Leptosia.*
1857. Wlk., C. B. Mus., Het., XII, 816, *Leptosia.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 36, *Thalpochares.*
1882. Grt., New List, 37, *Eustrotia.*
var. **parvimacula** Grt.
1880. Grt., North Amer. Ent., I, 66, *Eustrotia.*

HABITAT.—Canada to Texas; west to the Rocky Mountains; Texas in March; Canada and New York, May, June, and July.

The types are in the British Museum.

E. synochites G. & R.*

1868. G. & R., Trans. Am. Ent. Soc., I, 357, *Erastria.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 37, *Eustrotia.*

HABITAT.—Canada in June, to Texas; Central States, May to August.

A specimen labeled *synochitis* Grt., type, is in the British Museum. In the same collection is also a specimen of the same species labeled *Erastria viridata* Wlk., but I can not find any description of such a species.

E. olivula Gn.

1852. Gn., Spec. Gen., Noct., II, 231, pl. x, f. 8, *Bankia.*
1857. Wlk., C. B. Mus., Het., XII, 811, *Bankia.*
1890. Grt., Ent. Amer., VI, 164, *Eustrotia.*

HABITAT.—"North America."

The type is in M. Oberthür's collection. I am not aware that this species has been identified in American collections. It is a very distinctly marked form from the figure, and there should be no difficulty in recognizing it. Mr. Grote suggests that this may possibly be *synochitis*, but this can scarcely be so from the figure.

E. musta G. & R.*

1868. G. & R., Trans. Am. Ent. Soc., I, 358, *Erastria.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 37, *Eustrotia.*

HABITAT.—Eastern, Middle, and Central States; Missouri in May; Texas in August.

The type is in the collection of the American Entomological Society.

E. muscosula Gn.*

1852. Gn., Spec. Gen., Noct., II, 230, *Erastria.*
1857. Wlk., C. B. Mus., Het., XII, 807, *Erastria.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 37, *Eustrotia.*
1875. Speyer, Stett. Ent. Zeit., XXXVI, 159, *Erastria.*

HABITAT.—Eastern, Middle, and Central States; Canada and New York, June and July; District of Columbia, June and August.

The type is in the British Museum.

E. retis Grt.

1879. Grt., Can. Ent., XI, 198, *Eustrotia.*

HABITAT.—Pennsylvania.

The type is in the British Museum and is rather closely related to *caduca.*

E. distincta Grt.

1882. Grt., Papilio, II, 184, *Eustrotia.*

HABITAT.—Arizona.

The type is with Mr. Neumœgen.

E. caduca Grt.

1876. Grt., Can. Ent., VIII, 207, *Eustrotia.*

HABITAT.—Canada; New York; New Jersey in July.

The type is in the British Museum.

E. propera Grt.

1882. Grt., Papilio, II, 132 et 184, *Eustrotia.*

HABITAT.—Arizona.

The type is in the Neumœgen collection.

E. apicosa Haw.*

1812. Haworth, Lep. Britt., 261, *Phytometra.*
1829. Steph., Ill. Brit. Ent., Haust., III, 119, *Erastria.*
1835. Wood, Index Ent., 74, pl. 17, f. 464, *Erastria.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II. 199, *Eustrotia.*
nigritula Gn.
1852. Gn., Spec. Gen., Noct., II, 229, pl. X, f. 7, *Erastria.*
1857. Wlk., C. B. Mus., Het., XII, 807, *Erastria.*

1868. H. Sch., Corr.-Blatt, 1868, Cuba, 12, *Erastria.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 37, pr. syn.
1885. Gundlach, Cont. Ent. Cub., 315, *Erastria.*
undulifera Wlk.
1856. Wlk., C. B. Mus., Het., IX, 258, *Miana.*
1868. G. & R., Trans. Am. Ent. Soc., II, 78, = *nigritula.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 37, pr. syn.

HABITAT.—Canada to Florida; Cuba; Central States, June to September.

The Walker and Guenée types are in the British Museum and are one species as referred by Mr. Grote.

E. carneola Gn.*

1852. Gn., Spec. Gen., Noct., II, 228, *Erastria.*
1857. Wlk., C. B. Mus., Het., XII, 807, *Erastria.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 37, *Eustrotia.*
1881. Coquillett, Papilio, I, 7, larva.
1882. Coquillett, Papilio, II, 57, life history.
biplaga Wlk.
1857. Wlk., C. B. Mus., Het., XII, 809, *Erastria.*
1858. Wlk., C. B. Mus., Het., XIV, 1761, pr. syn.

HABITAT.—Canada; United States east of the Rocky Mountains, May to September.

The types are in the British Museum.

E. dividua Grt.

1880. Grt., North Am. Ent., I, 46, *Eustrotia.*

HABITAT.—Texas.

The type is in the British Museum.

E. aeria Grt.*

1881. Grt., Papilio, I, 11, *Eustrotia.*

HABITAT.—Wisconsin; Alabama.

The type is in the British Museum.

E. includens Wlk.*

1857. Wlk., C. B. Mus., Het., XII, 813, *Hydrelia.*
norma Morr.
1875. Morr., Can. Ent., VII, 216, *Hadena.*
1880. Grt., Can. Ent., VII, 186, = *mariæ.*
penita Morr.
1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 71, *Lithacodia.*
1880. Grt., Bull. Bkln. Ent. Soc., III, 39, = *norma.*
1880. Grt., Can. Ent., XII, 186, = *mariæ.*
mariæ Grt.
1877. Grt., Can. Ent., IX, 67, *Eustrotia.*
1880. Grt., Bull. Bkln. Ent. Soc., III, 39, = *norma.*

HABITAT.—Nova Scotia; Canada; Eastern and Middle States.

The Walker and Grote types are in the British Museum; the type of *penita* is in the Tepper collection; that of *norma* I have not seen. Mr.

Grote persistently used his name for this species, though both of Mr. Morrison's names antedate it by two years. The Walker name will probably have enough priority to secure recognition.

Eustrotia obaurata Morr., and *Erastria pustulata* are both = *Argyrophyes nigrofasciata* Zell. The other species erroneously described as *Erastria* will be found elsewhere referred to.

Genus **THALPOCHARES** Led.

1853. Led., Verh. k. k. zoöl. bot. Ges., 1853.
1857. Lederer, Noct. Europas, 184.

T. ætheria Grt.

1879. Grt., No. Amer. Ent., I, 47, *Thalpochares.*
1880. Grt., Can. Ent., XII, 59, *Thalpochares.*

HABITAT.—Florida.

Mr. Grote's type is in the British Museum.

T. flammicincta Wlk.*

1865. Wlk., C. B. Mus., Het., XXXIII, 801, *Anthophila.*
patula Morr.
1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 69, *Tarache.*
1880. Grt., Bull. Bkln. Ent. Soc., III, 38, *Thalpochares.*
1880. Grt., Can. Ent., XII, 57, *Thalpochares.*
patruelis Grt.
1876. Grt., Can. Ent., VIII, 27, *Tarache.*
1880. Grt., Bull. Bkln. Ent. Soc., III, 38, pr. syn.
1880. Grt., Can. Ent., XII, 57, *Thalpochares.*
1892. Butler, Entomologist, XXV, 189, *Eumestleta.*

HABITAT.—Texas, October and November; San Domingo.

Mr. Morrison's type is in the Tepper collection; Mr. Grote's is in the British Museum. Mr. Butler has made this species the type of a new genus, *Eumestleta;* with what justice, I am not prepared to say. The fact that I do not use the genus here indicates only that it was published so late that the addition referring to it was made in proof. I did not see the type of *Anthophila flammicincta* at the British Museum; but the species is so well marked that I have no hesitation in accepting Mr. Butler's determination. He suggests that the species may be Deltoid!

T. carmelita Morr.*

1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 431, *Thalpochares.*

HABITAT.—Texas; Mississippi; California.

The type is in the Tepper collection.

T. mundula Zell.*

1872. Zell., Verh. k. k. zoöl. bot. Ges., XXII, 460, pl. 2, f. 4, *Thalpochares.*

HABITAT.—Texas, May and June.

The type is in the Museum at Cambridge. It is a curious species, strongly resembling *Pleonectyptera* in appearance and in maculation.

T. orba Grt.

1877. Grt., Can. Ent., IX, 68, *Thalpochares.*

HABITAT.—Alabama.

The type is in the British Museum.

T. fortunata Grt.

1882. Grt., Can. Ent., XIV, 171, *Thalpochares.*

HABITAT.—Arizona.

The type is in the Neumœgen collection.

T. perita Grt.

1882. Grt., Can. Ent., XIV, 171, *Thalpochares.*

HABITAT.—Arizona.

A type is in the British Museum; another with Mr. Neumœgen.

Genus GALGULA Gn.

1852. Gn., Spec. Gen., Noct., II, 239.

G. hepara Gn.*

1852. Gn., Spec. Gen., Noct., II, 239, pl. X, f. 11, *Galgula.*
1857. Wlk., C. B. Mus., Het., XII, 817, *Galgula.*
externa Wlk.
1865. Wlk., C. B. Mus., Het., XXXIII, 985, *Euclidia.*
var. **partita** Gn.*
1852. Gn., Spec. Gen., Noct., II, 239, *Galgula.*
1852. Gn., Spec. Gen., Noct., III, 399, *Galgula subpartita.*
1857. Wlk., C. B. Mus., Het., XII, 817, *Galgula partita.*
resca Morr.
1875. Morr., Ann. Lyc. Nat. Hist., N. Y., XI, 103 *Telesilla.*
1876. Grt., Can. Ent., VIII, 26, pr. syn.
1876. Grt., Stett. Ent. Zeit., XXXVII, 137, pr. syn.

HABITAT.—Canada, in September. United States: New York, July and August; Massachusetts, in November; Texas, in March; California, in November.

The type of *hepara* is with M. Oberthür; that of *subpartita* and *externa* are in the British Museum, while that of *resca* is in the Tepper collection. Guenée originally used the term *partita*, but under his own rules changed it to *subpartita* in the index.

Genus TRIPUDIA Grt.

1877. Grt., Can. Ent., IX, 70.

T. flavofasciata Grt.

1877. Grt., Can. Ent., IX, 70, *Tripudia.*
versutus Hy. Edw.
1881. Hy. Edw., Papilio, I, 116, *Oribates.*
1882. Grt., Bull. Geol. Surv., VI, 563, pr. syn.
1882. Grt., Can. Ent., XIV, 33, pr. syn.

HABITAT.—Alabama; Texas; New Mexico; Colorado.

Mr. Grote's type is in the British Museum; that of *versutus* is in the Neumœgen collection.

T. quadrifera Zell.*

1874. Zell., Verh. k.-k. zoöl. bot. Ges., XXIV, pl. XII, f. 2, *Erastria*.
1877. Grt., Can. Ent., IX, 79, *Tripudia*.

HABITAT.—Mexico; Texas; Missouri.

I have not seen the type, nor do I know where it is at present. I have Zeller's paper only in the separate form, in which the description is on p. 3.

T. opipara Hy. Edw.*

1881. Hy. Edw., Papilio, I, 117, *Gyros*.
1882. Grt., New List, 37, *Tripudia*.

HABITAT.—Texas in May.

The type is in Mr. Graef's collection.

T. limbata Hy. Edw.*

1881. Hy. Edw., Papilio, I, 22, *Oribates*.
1882. Grt., New List, 37, *Tripudia*.

HABITAT.—Mazatlan, Mexico; Texas.

The type is in the Edwards collection.

T. basicinerea Grt.

1882. Grt., Bull. Geol. Surv., VI, 563, *Tripudia*.

HABITAT.—Arizona.

The type is in the Neumœgen collection.

T. lixiva Grt.

1882. Grt., Can. Ent., XIV, 173, *Tripudia*.

HABITAT.—Arizona.

The type is in the Neumœgen collection.

Genus **GYROS** Hy. Edw.

1881. Hy. Edw., Papilio, I, 117.

G. muirii Hy. Edw.

1881. Hy. Edw., Papilio, I, 22, *Oribates*; id., 117, *Gyros*.

HABITAT.—California.

The type is in the Edwards collection.

Lepidomys irrenosa Gn., II, 202, pl. X, f. 1, is usually placed here, but is certainly not North American. The type is in the British Museum. M. Guenée gave New York as the locality; but nothing on the specimen itself nor in the record indicates where it really came from; it has the Doubleday label and that is all. The insect itself is very peculiar; it has a thick truncated tuft of hair at the base of primaries; the palpi like *Pleonectyptera* and altogether it has the look of a tropical species. I do not believe for an instant that it came from New York, and prefer to drop it from our lists as not of our fauna, until the contrary is proved by new specimens.

Genus **METOPONIA** Dup.

1844. Dup., Cat. Lep. Meth. Eur.

M. obtusa H. Sch.*

1853. H. Sch., Ex. Schmett., 68, f. 210, *Metoponia.*
1875. Harv., Bull. Buff. Soc. Nat. Sci., iii, 11, *Metoponia.*
obtusula Zell.
1873. Zell., Verh. k.-k. zoöl.-bot. Ges., xxiii, 204, pl. iii, f. 2, *Metoponia.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., ii, 199, pr. syn.

HABITAT.—Middle and Central States; Texas in April.

Zeller's type is in the Museum of Comparative Zoölogy at Cambridge.

M. perflava Harv.*

1875. Harv., Bull. Buff. Soc. Nat. Sci., iii, 11, *Metoponia.*

HABITAT.—Texas in April.

The type is in the British Museum.

M. macula Smith.

1891. Smith, Trans. Am. Ent. Soc., xviii, 132, *Metoponia.*

HABITAT.—Las Vegas, New Mexico.

Types are in the Neumœgen and Hulst Collections.

Genus **HYBLÆA** Fabr.

1793. Fabr., Ent. Syst., iii, 2, 127.

H. puera Cram.*

1779. Cram., Pap. Ex., ii, 10, pl. 103, f. D. E., *Phalæna.*
1811. Oliv., Enc. Méth., viii, 282, *Noctua.*
1852. Gn., Spec. Gen., Noct., ii, 390, *Hyblæa.*
1857. Wlk., C. B. Mus., Het., xii, 979, *Hyblæa.*
1868. H. Sch., Corr.-Blatt, 1868, Cuba, p. 23, *Hyblæa.*
1885. Gundlach, Cont. Ent. Cub., 339, *Hyblæa.*
saga Fabr.
1787. Fabr., Mant. Insect., ii, 137, *Noctua.*
1793. Fabr., Ent. Syst., iii, 2, 128, *Hyblæa.*
1852. Gn., Spec. Gen., Noct., ii, 390, pr. syn.
mirificum Strk.
1876. Strk., Lep. Rhop. et Het., 122, *Ænigma.*
1881. Grt., Can. Ent., xiii, 16, pr. syn.
1883. Grt., Proc. Am. Phil. Soc., xxi, 169, pr. syn.

HABITAT.—Texas; Florida; West Indies.

Guenée also cites *Noctua unxia* Hbn., and *H. apricans* Bdv., as synonymous with the above species. It seems to be a common form in more tropical regions and only occasional in our own fauna.

Genus **DRASTERIA** Hbn.

1816. Hübner, Verzeichniss, 280.

D. erechtea Cram.*

1782. Cram., Pap. Ex. iii, 149, pl. 275, f. E., *Phalæna.*
1816. Hbn., Verzeichniss, 281, *Drasteria.*
1852. Gn., Spec. Gen., Noct., iii, 289, *Drasteria.*

1858. Wlk., C. B. Mus., Het., XIV, 1156, *Drasteria.*
1869. Saund., Can. Ent., I, 4, larva.
1875. Saund., Can. Ent., VII, 116, larva.
1875. Hy. Edw., Proc. Cal. Ac. Sci., VII, 23, egg.
1882. Pack., Papilio, II, 147, *Drasteria.*
1884. French, Papilio, IV, 119, life history.
1885. Riley, 4th Rept. U. S. Ent. Comm., 352, pl. 62, f. 5, all stages.
sobria Wlk.
1857. Wlk., C. B. Mus., Het., XII, 835, *Microphysa.*
1868. G. & R., Trans. Am. Ent. Soc., II, 79, *Drasteria.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 389, pr. syn.
narrata Wlk.
1858. Wlk., C. B. Mus., Het., XIV, 1474, *Poaphila.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 38, pr. syn.
patibilis Wlk.
1858. Wlk., C. B. Mus., Het., XIV, 1471, *Poaphila.*
agricola G. & R.
1868. G. & R., Trans. Am. Ent. Soc., I, 189, pl. IV, f. 31, *Drasteria.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 38, pr. syn.
♀ *mundula* G. & R.
1868. G. & R., Trans. Am. Ent. Soc., I, 191, pl. IV, f. 35, *Drasteria.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 155, *Drasteria.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 38, pr. syn.

HABITAT.—Eastern United States to Colorado; New Mexico; British Columbia; Canada. Found at almost all times from April to October.

D. crassiuscula Haw.*

1810. Haw., Lep. Britt., 259, *Phytometra.*
1829. Steph., Ill. Brit. Ent., Haust., III, 126, ? *Ophiusa.*
1833. Wood, Index Ent., pl. 17, f. 136, *Ophiusa.*
1858. Wlk., C. B. Mus., Het., XIV, 1456, = *erechtea.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 199, = *erechtea.*
erichto Gn.
1852. Gn., Spec. Gen., Noct., III, 290, *Drasteria.*
1858. Wlk., C. B. Mus., Het., XIV, 1457, *Drasteria.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 154; an var. *erechtea.*
var. **ochrea** Grt.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 155, an var. *erechtea.*
var. **distincta** Neum.
1883. Neum., Papilio, III, 143, *Drasteria.*

HABITAT.—With the preceding.

The synonomy given above is the result of a very clever study of the genus by Mr. M. V. Slingerland, who demonstrated that the two species were usually confused in collections, and identified all the names with the proper species. Walker's types are in the British Museum, and all his specimens are, I believe, of the *erechtea* form. *P. amplissima* Wlk., which had also been referred here is really *Parallelia bistriaris;* on the other hand *Poaphila patibilis* Wlk., undoubtedly belongs here. *Phalæna spadix* Cram., has been referred by Mr. Grote as the female of *erechtea*, and Walker made the figure the type and only species of his genus *Cissusa*, without ever having seen an example. Mr. Slingerland called my attention to the fact that the figure could scarcely be meant for *erechtea*. An examination of Cramer's work proved that he was correct, and that the figure referred to the form named *Tæniocampa vegeta* by Mr. Morrison. A very closely allied form has been described in *Synedoida* by Mr. Grote, and it is not improbable that Mr. Edwards' genus may have to give place to Walker's *Cissusa*.

Mr. Slingerland's work has not yet appeared at date of writing, hence could not be specifically referred to.

D. cærulea Grt.

1873. Grt., Bull. Buff. Soc. Nat. Sci., 155, *Drasteria*.
aquamarina Feld.
1874. Feld., Reise der Nov., Zoöl., II, pt. 2, pl. 117, f. 10, *Euclidia*.
1875. Feld., loc. cit., addenda, =*plumbeola* Grt.

HABITAT.—California.

Mr. Grote's type is in the British Museum. Felder's plates bear date in 1873, but were not issued until late in 1874. He makes a curious error in referring his species to the synonomy, using the name *plumbeola* Grt., and correctly referring to the description of *cærulea*.

Genus **CÆNURGIA** Wlk.

1858. Wlk., C. B. Mus., Het., XIV, 1491.

C. convalescens Gn.*

1852. Gn., Spec. Gen., Noct., III, 289, *Drasteria*.
1858. Wlk., C. B. Mus., Het., XIV, 1456, *Drasteria*.
1869. H. Sch., Corr. Blatt, 1869, Cuba, 26, *Drasteria*.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 154, *Drasteria*.
1875. Grt., Can. Ent., VII, 49, *Litosea*.
1885. Gundlach, Cont. Ent. Cuba., 350, *Drasteria*.
socors Wlk.
1858. Wlk., C. B. Mus., Het., XIV, 1492, *Cænurgia*.
purgata Wlk.
1858. Wlk., C. B. Mus., Het., XIV, 1491, *Cænurgia*.

HABITAT.—Canada to Florida; Central States. Walker's types are in the British Museum. Guenée had several specimens before him when he described; but whether the British Museum specimens were of the types I cannot find. Mr. Walker's genus has priority over *Litosea*.

C. adversa Grt.*

1875. Grt., Can. Ent. VII, 49, *Litosea*.

HABITAT.—California.

The type is in the British Museum.

Genus **HYPOCALA** Gn.

1852. Gn., Spec. Gen., Noct., III, 73.

H. hillii Lint.*

1878. Lint., Ent. Cont., IV, 103, *Hypocala*.

HABITAT.—New York, October; Texas, September; Florida in June. The type is in the Hill collection; a second specimen, before the author when he wrote, is in the National Museum.

Genus **EUCLIDIA** Ochs.

1816. Ochs., Schmett. Eur., IV, 96.

E. cuspidea Hbn.

1818. Hbn., Zutræge, I, 16, ff. 69–70, *Drasteria.*
1816. Hbn., Verzeichniss, 280, *Drasteria.*
1852. Gn., Spec. Gen., Noct., III, 292, *Euclidia.*
1857. Wlk., C. B. Mus., Het., XIV, 1460, *Euclidia.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 154, *Euclidia.*
1880. Grt., Can. Ent., XII, 86, *Euclidia.*

HABITAT.—Canada; Northern, Eastern, Middle, and Central States, May to August.

E. intercalaris Grt.

1882. Grt., Bull. Geol. Surv., VI, 563, *Euclidia.*

HABITAT.—New Mexico.

I have seen the type, which was described from Prof. Snow's collection, in the British Museum.

E. annexa Hy. Edw.

1890. Hy. Edw., Ento. Amer., VI, 115, *Euclidia.*

HABITAT.—Rouge River, Oregon.

The types are in the British Museum.

Genus **GRAMMODES** Gn.

1852. Gn., Spec. Gen., Noct., III, 275.

G. smithii Gn.

1852. Gn., Spec. Gen., Noct., III, 266, pl. XXII, f. 4, *Ophiusa.*
1858. Wlk., C. B. Mus., Het., XIV, 1420, *Ophiusa.*
1882. Grt., New List, 39, *Grammodes.*

HABITAT.—Southern States.

G. similis Bdv.

1852. Gn., Spec. Gen., Noct., III, 267, *Ophiusa.*
1858. Wlk., C. B. Mus., Het., XIV, 1420, *Ophiusa.*
1882. Grt., New List, 39, *Grammodes.*
var **apicalis** Bdv.
1852. Gn., Spec. Gen., Noct., III, 267, pr. var.

HABITAT.—Georgia; Southern States.

G. consobrina Gn.

1852. Gn., Spec. Gen., Noct., III, 268, *Ophiusa.*
1857. Wlk., C. B. Mus., Het., XIV. 1420, *Ophiusa.*
1882. Grt., New List, 39, *Grammodes.*

HABITAT.—Southern States.

The types of all these species are with M. Oberthür. The *Ophiusa similis* Wlk.,—whether of Boisduval I cannot say—is rather a *Poaphila* and is new to me. No specimens of it were in the Grote collection. I do not know the type of *Grammodes* and can not say whether the American species are correctly referred. Guenée considered neither of them referable to his genus.

Genus **PANULA** Gn.

1852. Gn., Spec. Gen., Het., III, 59.

P. inconstans Gn.*

1852. Gn., Spec. Gen., Noct., III, 59, pl. XIII, f. 9, *Panula*.
1857. Wlk., C. B. Mus., Het., XIII, 1144, *Panula*.

HABITAT.—Southern States; Texas.

A type is in the British Museum. Guenée describes it from "Coll. div.," and had a number of specimens, showing quite a range of variation, before him.

P. remigipila Gn.

1852. Gn., Spec. Gen., Noct., III, 60, *Panula*.
1857. Wlk., C. B. Mus., Het., XIII, 1144, *Panula*.

HABITAT.—East Florida.

The type is in the British Museum. It is rather a curious species, of the uniform *Tæniocampa* red-brown; but with the typical Synedoid median lines pale marked. It strongly resembles some of the species of *Synedoida*. *Tæniocampa vegeta* Morr., must be compared with this species, and here also *Cissusa spadix* must be referred to as probably congeneric.

Genus **CISSUSA** Wlk.

1856. Wlk., C. B. Mus., Het., IX, 153.

C. spadix Cram.

1780. Cram., Pap. Exot., III, 149, pl. 275, f. F, *Phalæna*.
1856. Wlk., C. B. Mus., Het., IX, 153, *Cissusa*.
1873 Grt., Bull. Buff. Soc. Nat. Sci., I, 155,=*D. erechtea*.
vegeta Morr.
1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 432, *Tæniocampa*.

HABITAT.—Texas; Southwestern United States.

I have already spoken of this species, which has been long overlooked, and which has been almost certainly described at least twice more than I have indicated. *Cissusa* was described from Cramer's picture of the species; but may have to replace *Synedoida*.

Genus **SYNEDOIDA** Hy. Edw.

1878. Hy. Edw., Proc. Cal. Ac. Sci., Pacific Coast Lep., No. 29, 9.

The above paper was published as a separate only. The species of this genus are ill associated, and there are too many of them. Mr. Edwards had himself intended to unite some of the forms, as larger material proved them identical.

S. cervina Hy. Edw.

1882. Hy. Edw., Papilio, II, 129, *Synedoida*.

HABITAT.—Arizona.

The type is in the Neumœgen collection.

S. inepta Hy. Edw.*

1881. Hy. Edw., Papilio, I, 27, *Synedoida.*
morbosa Hy. Edw.
1881. Hy. Edw., Papilio, I, 27, *Synedoida.*

HABITAT.—Colorado.

Types of both forms are in the Neumœgen collection. Mr. Edwards has admitted the identity of the two for some time.

S. biformata Hy. Edw.*

1878. Hy. Edw., Pacific Coast Lep., No. 29, 9, *Synedoida.*

HABITAT.—California.

The types are in the Edwards collection.

S. scrupulosa Hy. Edw.

1878. Hy. Edw., Pacific Coast Lep., No. 29, 9, *Synedoida.*

HABITAT.—California; Colorado.

The types are in the Edwards and Neumœgen collections.

S. insperata Grt.

1882. Grt., Can. Ent., XIV, 176, *Synedoida.*

HABITAT.—Arizona.

This type is in the Neumœgen collection.

S. mucronata Grt.

1883. Grt., Can. Ent., XV, 121, *Synedoida.*

HABITAT.—Arizona.

The type is with Mr. Neumœgen.

S. ægrotata Hy. Edw.

1884. Hy. Edw., Papilio, IV, 47, *Synedoida.*

HABITAT.—Arizona.

The types are with Mr. Neumœgen. Mr. Neumœgen thinks it is the female of *Melipotis perlæta* Edw.

S. valens Hy. Edw.*

1881. Hy. Edw., Papilio, I, 119, *Synedoida.*

HABITAT.—Utah; Colorado in September.

The type is with Mr. Neumœgen.

S. sabulosa Hy. Edw.

1881. Hy. Edw., Papilio, I, 26, *Synedoida.*
1882. Grt., Ill. Essay, 66, pl. IV, f., 39, *Synedoida.*

HABITAT.—Colorado.

The types are in the Neumœgen collection.

Genus **LITOCALA** Harv.

1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 3.

L. sexsignata Harv.*

1875. Harv., Bull. Buff. Soc. Nat. Sci., II, 280, *Lita.*
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 3, *Litocala.*
var **deserta** Hy. Edw.
1881. Hy. Edw., Papilio, I, 25, pr. var.

HABITAT.—Nevada; Colorado; Arizona; New Mexico; California in June.

The type of Dr. Harvey's species is in the British Museum; that of *deserta* is in the Edwards collection.

Genus **SYNEDA** Gn.

1852. Gn., Spec. Gen., Noct., III, 71.

With this genus begins a series of forms similar in appearance and habitus, and leading to *Catocala.* There are numerous species described, and very few collections have more than a fair percentage of them. In some of the genera the range of variation is very great, and it is very probable that there will be a very large reduction in the number of species when they are once well known. In many cases the sexes are extremely dissimilar and have been described as separate species.

S. athabasca Neum.

1883. Neum., Papilio, III, 143, *Syneda.*

HABITAT.—British Columbia.

This type is in Mr. Neumœgen's collection.

S. hudsonica G. & R.

1865. G. & R., Proc. Ent. Soc. Phil., IV, 494, pl. III, f. 7 and 8, *Syneda.*
1869. Bethune, Can. Ent., I, 87, *Syneda.*
1878. Graef, Bull. Bkln. Ent. Soc., I, 54, *Leucanitis.*
1883. Grt., Can. Ent., XV, 5, *Syneda.*

HABITAT.—Hudson Bay Territory; Canada; Montana.

I have not seen the type, nor do I know where it is to be found at present.

S. graphica Hbn.*

1818. Hbn., Zutræge, I, 8, f. 11, 12, *Drasteria.*
1852. Gen., Spec. Gen., Noct., III, 71, *Syneda.*
1857. Wlk., C. B. Mus., Het., XIII, 1162, *Syneda.*
1865. G. & R., Proc. Ent. Soc. Phil., IV, 495, *Syneda.*
1878. Graef, Bull. Bkln. Ent. Soc., I, 54, *Leucanitis.*
1880. Grt., Can. Ent., XII, 85, *Syneda.*
capticola Wlk.
1858. Wlk., C. B. Mus., Het., XIV, 1461, *Euclidia.*
1882. Grt., New List, 39, *Syneda.*
var. **media** Morr.
1875. Morr., Proc. Bost. Soc. N. H., XVIII, 125, pr. var.

HABITAT.—New York; New Jersey, in May; southward to Florida, Walker's species is in the British Museum; Mr. Morrison's type is in the Meyer collection. Walker's type is quite the typical form of what is known in our collections as *graphica*.

S. divergens Behr.*

1870. Behr, Trans. Am. Ent. Soc., III, 27, *Syneda.*

HABITAT.—California; Colorado.

The type is probably with Dr. Behr.

S. petricola Wlk.

1858. Wlk., C. B. Mus., Het., XIV, 1162, *Euclidia.*
1882. Grt., New List, 39, *Syneda.*

HABITAT.—Rocky Mountains.

The type is in the British Museum. It is a small species near *adumbrata* Behr, and is not in the Grote collection. It seems a good species, and is, at all events, new to me.

S. alleni Grt.*

1877. Grt., Can. Ent., IX, 215, *Syneda.*
1878. Grt., Bull. Geol. Surv., IV, 183, *Syneda.*
saxea Hy. Edw.
1881. Hy. Edw., Papilio, I, 26, *Syneda adumbrata* var.
1882. Grt., New List, 39, pr. syn.

HABITAT.—Canada, in June and July; Maine; Nevada; Colorado.

Mr. Grote's type is in the British Museum; the type of *saxea* is in the Edwards collection.

S. adumbrata Behr.*

1870. Behr, Trans. Am. Ent. Soc., III, 27, *Syneda.*
1875. Grt., Can. Ent., VII, 70, *Syneda.*
1878. Graef, Bull. Bkln. Ent. Soc., I, 54, *Leucanitis..*

HABITAT.—California, in July; Nevada; Washington; Arizona; Colorada; Utah, in June.

I have not seen the type, which is probably in Dr. Behr's own collection.

S. occulta Hy. Edw.

1881. Hy. Edw., Papilio, I, 118, *Syneda.*

HABITAT.—Texas.

The type is with Mr. Neumœgen.

S. seposita Hy. Edw.*

1881. Hy. Edw., Papilio, I, 25, *Syneda.*

HABITAT.—Colorado; Utah.

The type is in the Neumœgen collection.

S. socia Behr.*

1870. Behr, Trans. Am. Ent. Soc., III, 27, *Syneda.*
1878. Graef, Bull. Bkln. Ent. Soc., I, 54, *Leucanitis.*

HABITAT.—California in July; Arizona; Colorado in August.

I have not seen the type, which is probably with Dr. Behr.

S. ochracea Behr.

1870. Behr, Trans. Am. Ent. Soc., III, 25, *Syneda.*
1878. Graef, Bull. Bkln. Ent. Soc., I, 54, *Leucanitis.*

HABITAT.—California.

I have not seen the type. It is probably with Dr. Behr.

S. mirifica Hy. Edw.

1878. Hy. Edw., Pacific Coast Lep., No. 29, 8, *Syneda.*

HABITAT.—Nevada.

The type is in the Edwards collection.

S. tejonica Behr.

1870. Behr, Trans. Am. Ent. Soc., III, 26, *Syneda.*
1878. Graef, Bull. Bkln. Ent. Soc., I, 54, *Leucanitis.*

HABITAT.—California; Colorado.

The type is probably with Dr. Behr. I have not seen it.

S. nubicola Behr.

1870. Behr, Trans. Am. Ent. Soc., III, 25, *Syneda.*
1878. Graef, Bull. Bkln. Ent. Soc., I, 54, *Leucanitis.*

HABITAT.—California.

Dr. Behr has the type, I believe.

S. maculosa Behr.

1876. Behr, Trans. Am. Ent. Soc., III, 26, *Syneda.*
1878, Graef, Bull. Bkln. Ent. Soc., I, 54, *Leucanitis.*

HABITAT.—California.

The type is probably in Dr. Behr's collection.

S. hastingsii Hy. Edw.

1878. Hy. Edw., Pacific Coast Lep., No. 29, 8, *Syneda.*
var. **perpallida** Hy. Edw.
1881. Hy. Edw., Papilio, I, 25, *Syneda.*

HABITAT.—Oregon; California.

The types are in the Edwards collection.

S. faceta Hy. Edw.

1881. Hy. Edw., Papilio, I, 119, *Syneda.*

HABITAT.—Florida.

The type is in the Edwards collection.

S. howlandii Grt.*

1864. Grt., Proc. Ent. Soc. Phil., III, 533, pl. 6, f. 7, *Syneda.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 154, *Syneda.*
1878. Graef, Bull. Bkln. Ent. Soc., I, 54, *Leucanitis.*
stretchii Behr.
1870. Behr, Trans. Am. Ent. Soc., III, 27, *Syneda.*
1875. Grt., Can. Ent., VII, 70, pr. syn.

HABITAT.—California; Arizona; Colorado in September; Nevada.

The type of Mr. Grote's species should be in the collection of the American Entomological Society; but I have not found it there.

S. perplexa Hy. Edw.

1884. Hy. Edw., Papilio, IV, 47, *Syneda.*

HABITAT.—Arizona.

The type is in the Neumœgen collection.

S. ingeniculata Morr.*

1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 435, *Syneda.*
1878. Graef, Bull. Bkln. Ent. Soc., I, 51, *Leucanitis.*

HABITAT.—Texas.

The type is in the Museum of Comparative Zoölogy at Cambridge and resembles *graphica* in a general way, but with less contrast of color and shade.

S. edwardsii Behr.*

1870. Behr, Trans. Am. Ent. Soc., III, 28, *Syneda.*
1878. Graef, Bull. Bkln. Ent. Soc., I, 54, *Leucanitis.*

HABITAT.—California.

The type is probably in Dr. Behr's hands.

Genus **CIRRHOBOLINA** Grt.

1875. Grt., Trans. Am. Ent. Soc., V, 117.

C. deducta Morr.*

1874. Morr., Proc. Bost. Soc. N. H., XVII, 220, *Syneda.*
1878. Graef, Bull. Bkln. Ent. Soc., I, 51, *Leucanitis.*
1880. Grt., Bull. Bkln. Ent. Soc., III, 38, *Cirrhobolina.*
♀ *pavitensis* Morr.
1874. Morr., Proc. Bost. Soc. N. H., XVII, 221, *Syneda.*
1875. Grt., Trans. Am. Ent. Soc., V, 117, pr. syn.

HABITAT.—Texas in April, May, June, July, August.

The types are in the Museum of Comparative Zoölogy at Cambridge and have been correctly referred as sexes of the same species. A duplicate type of *pavitensis* is in the Tepper collection.

C. mexicana Behr.*

1870. Behr, Trans. Am. Ent. Soc., III, 27, *Syneda.*
1882. Grt., New List, 39, *Cirrhobolina.*
incandescens Grt.
1875. Grt., Trans. Am. Ent. Soc., V, 117, *Cirrhobolina.*
1878. Graef, Bull. Bkln. Ent. Soc., I, 54, an var. *deducta.*
1880. Grt., Bull. Bkln. Ent. Soc., III, 38, an var. *deducta.*
1882. Grt., New List, 39, pr. syn.
var. **vulpina** Hy. Edw.
1882. Hy. Edw., Papilio, II, 14, pr. var.

HABITAT.—New Mexico; Arizona; Colorado; Texas in August and November.

I have seen none of the types. That of Mr. Edwards' variety is in the Neumœgen collection. Dr. Behr's specimen is probably in his own collection.

C. perfecta Hy. Edw.

1884. Hy. Edw., Papilio, IV, 46, *Syneda.*
1891. Smith, List Lepidoptera, 58, *Cirrhobolina.*

HABITAT.—Arizona.

The type is in the Neumœgen collection.

C. tetrica Hy. Edw.

1878. Hy. Edw., Pacific Coast, Lep., No. 29, 10, *Cirrhobolina.*

HABITAT.—California.

Types are in the Edwards and Behr collections.

Genus **MELIPOTIS** Hbn.

1816. Hübner, Verzeichniss, 260.

M. fasciolaris Hbn.*

1823. Hbn., Zutræge, III, 15, ff. 443, 444, *Aedia.*
1852. Gn., Spec. Gen., Noct., III, 69, *Bolina.*
1857. Wlk., C. B. Mus., Het., XIII, 1147, *Bolina.*
1878. Graef, Bull. Bkln. Ent. Soc., I, 54, *Leucanitis.*
1880. Grt., Can. Ent., XII, 118, *Melipotis.*
1888. Moeschl., Ent., Amer., III, 198, *Bolina.*
fascicularis Gn.—in part.
1852. Gn., Spec. Gen., Noct., III, 63, *Bolina.*
1857. Wlk., C. B. Mus., Het., XIII, 1147, pr. syn.
1874. Morr., Proc. Bost, Soc. N. H., XVII, 220, pr. syn.
1888. Moeschl., Ento. Amer., III, 198, =*fasciolaris* in part.
♀ *cunearis* Gn.
1857. Gn., Spec. Gen., Noct., III, 70, *Bolina.*
1888. Moeschl., Ento. Amer., III, 198, pr. syn.
1888. Butler, Ento. Amer., IV, 13, pr. syn.

HABITAT.—West Indies; ? Gulf States.

Mr. Moeschler's paper, above cited, should be referred to for the rather involved synonymy of the species, grounded in a very curious error made by Guenée. It is at least questionable whether the true *fasciolaris* occurs with us. Mr. Moeschler thought it did not, and I have not seen any such specimens as he sent me, from our territory.

M. nigrescens G. & R.*

1866. G. & R., Proc. Ent. Soc. Phil., VI, 20, pl. III, f. 4, *Aedia.*
1874. Morr., Proc. Bost. Soc. N. H., XVII, 220, =*fasciolaris.*
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 12, *Bolina*, an sp. dist.
1878. Graef, Bull. Bkln. Ent. Soc., I, 54, *Leucanitis.*
1878. Grt., Bull. Geol. Surv., IV, 184, an sp. dist. *fasciolaris.*
1883. Grt., Can. Ent., XV, 5, *Melipotis.*
♂ *ochreipennis* Harv.
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 12, *Bolina.*
1875. Grt., Trans. Am. Ent. Soc., V, 117, *Bolina.*

1878. Graef, Bull. Bkln. Ent. Soc., I, 4, pr. var.
1878. Grt., Bull. Geol. Surv., IV, 181, = ♂ prec.
1888. Grt., Can. Ent., XX, 139, = ♂ prec.
1888. Moeschl., Ent. Amer., III, 197, *Bolina.*
fascicularis Gn.—partim.
1852. Gn., Spec. Gen., Noct., III, 63, *Bolina.*
1888. Moeschl., Ent. Amer., III, 197, pr. syn.

HABITAT.—Texas in April, May, and November; Colorado: Delaware in June.

The Grote and Robinson type I have not seen; but have seen specimens named by Mr. Grote. Dr. Harvey's type is in the British Museum from the Grote collection. There is no reasonable doubt that Dr. Harvey described only the normal male form.

M. hadeniformis Behr.

1870. Behr, Trans. Am. Ent. Soc., III, 25, *Syneda.*
1875. Grt., Check List, Noct., 40, *Melipotis.*
1878. Graef, Bull. Bkln. Ent. Soc., I, 54, *Leucanitis.*

HABITAT.—California.

The type is probably with Dr. Behr.

M. pallescens G. & R.*

1866. G. & R., Proc. Ent. Soc. Phil., VI, 21, pl. 3, f. 5, *Aedia.*
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 13, *Bolina.*
1876. Grote, List Noctuidæ, 40, *Melipotis.*
1878. Graef, Bull. Bkln. Ent. Soc., I, 54, *Leucanitis.*

HABITAT.—Texas in April and June; Colorado in August.

I have not seen the type; but there are specimens labeled by Mr. Grote in the British Museum.

M. perlæta Hy. Edw.

1882. Hy. Edw., Papilio, II, 14, *Melipotis.*

HABITAT.—Arizona.

The type is in the Neumœgen collection. See *Synedoida ægrotata* for a note on this species.

M. limbolaris Geyer.*

1825. Geyer, Zutræge, IV, ff. 689, 690, *Aedia.*
1852. Gn., Spec. Gen., Noct., III, 71, *Syneda.*
1857. Wlk., C. B. Mus., Het., XIII, 1168, *Syneda.*
1864. G. & R., Proc. Ent. Soc. Phil., IV, 494, *Syneda.*
1878. Graef, Bull. Bkln. Ent. Soc., I, 54, *Leucanitis.*
1881. Grt., Can. Ent., XIII, 91, *Melipotis.*
grandirena Haw.
1810. Haw., Lep. Britt., 264, *Phytometra.*
1829. Steph., Ill. Brit. Ent., Haust., III, 126, Note, ? *Ophiusa.*
1858. Wlk., C. B. Mus., Het., XIV, 1442, *Grammodes.*
1878. Butler, Proc. Zoöl. Soc. Lond., 1878, 487, pr. syn.

HABITAT.—New Hampshire; Massachusetts; New York in July, to Florida; Wisconsin.

M. tenella Hy. Edw.

1881 Hy. Edw., Papilio, I, 26, *Melipotis.*

HABITAT.—Texas.

The type is in the Neumœgen collection.

M. stygialis Grt.

1878. Grt., Bull. Geol. Surv., IV, 184, *Melipotis.*
1883. Grt., Can. Ent., XV, 5, *Melipotis.*

HABITAT.—Illinois; Texas.

The British Museum specimen is not the type, the location of which I do not know.

M. versabilis Harv.

1877. Harv., Can. Ent., IX, 94, *Melipotis* var. *jucunda.*
1880. Grt., Can. Ent., XII, 86, var. *jucunda.*
1883. Grt., Can. Ent., XV, 6, an sp. dist.

HABITAT.—Texas.

The type I have not seen, nor can I say where it is at present.

M. jucunda Hbn.*

1818. Hbn., Zutraege, I, 17 ff. 81, 82, *Melipotis.*
1816. Hbn., Verzeichniss, 280, *Melipotis.*
1857. Wlk., C. B. Mus., Het., XIII, 1145, *Bolina.*
1870. Behr, Trans. Am. Ent. Soc., III, 25, *Bolina.*
1875. Harv., Bull. Buff. Soc. Nat. Sci., II, 280, *Bolina.*
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 13, *Bolina.*
1878. Graef, Bull. Bkln. Ent. Soc., I, 54, *Leucanitis.*
1880. Grt., Can. Ent., XII, 86, *Melipotis.*
cinis Gn.
1852. Gn., Spec. Gen., Noct., III, 62, *Bolina.*
1857. Wlk., C. B. Mus., Het., XIII, 1145, pr. syn.
agrotipennis Harv.
1875. Harv., Bull. Buff. Soc. Nat. Sci., II, 280, *Bolina.*

HABITAT.—New York to Texas and Florida; Colorado in June; Texas in July and September.

Dr. Harvey's type is in the British Museum. *Agrotipennis* is a very dark form of *jucunda.* The characters pointed out by Dr. Harvey prove evanescent on examination of a good series.

M. sinualis Harv.*

1877. Harv., Can. Ent., IX, 94, *Melipotis.*

HABITAT.—Texas in May and September.

The type is in the British Museum.

Genus **HYPOGRAMMA** Gn.
1852. Gn., Spec. Gen., Noct., III, 34.

H. andromedæ Gn.

1852. Gn., Spec. Gen., Noct., III, 84, *Hypogramma.*
1857. Wlk., C. B. Mus., Het., XIII, 1095, *Hypogramma.*

HABITAT.—Georgia.

The species was described from a design by Abbot and has no type. So far as I am aware it has not been identified. Its recognition will be possible from the life history.

Genus **MAGUSA** Wlk.

1857. Wlk., C. B. Mus., Het., XI, 762.

M. divaricata Grt.*

1874. Grt., Sixth Rept. Peab. Ac. Sci., 37, *Stictoptera*.
1875. Harv., Bull. Buff. Soc. Nat. Sci., II, 281, *Stictoptera*.

HABITAT.—Wisconsin; New York; Florida; Texas in December.

The type is in the British Museum. The species belongs to *Magusa* rather than *Stictoptera*, and is very close to the *Magusa dissidens* Feld. and Rog., if not indeed the same. The latter species is in the Berliner Museum, in which I had a chance to compare typical *Stictoptera*. Moeschler has described a very closely allied species from the West Indies as a *Laphygma*.

Genus **CATOCALA** Schrank.

1802. Schrank, Fauna Boica, II, 2, 158.

In this genus I have made no original studies and no comparisons. The species have been great favorites with collectors, and much has been written concerning their habits and variations. Mr. Grote and Mr. Hy. Edwards have devoted special attention to the genus; and, lastly, Dr. Hulst has given a monographic revision in the Bulletin of the Brooklyn Entomological Society, VII, pp. 15–56, 1884, in which the species are separated on structural peculiarities. This revision is followed here in essentials, and must be consulted in any study of the genus. The departures from the order given in the publication cited are all such as Dr. Hulst has himself suggested in the check list of Lepidoptera edited by me. I have not kept up my references as carefully in this genus as in some others, but I do not think I have omitted anything really important. A great many mere notes of captures and of habits are not referred to, though interesting in themselves and valuable to the student of geographical distribution. I did not examine the British Museum series, and therefore am not to be considered as indorsing the correctness of any synonymy given. My notes concerning the location of type specimens are meager, but there are few genera in which the literature is so good and the reference to actual types so seldom necessary. Most of the Hulst types are in the Rutgers College collection. Mr. Grote and Mr. Edwards have both examined the British Museum collection, and their references are probably accurate.

§ EUPARTHENOS Grt.

1876. Grt., Ann. Lyc. Nat. Hist. N. Y., XI, 301.

C. nubilis Hbn.*

1816. Hbn., Samml. Ex. Schmett., II, pl. 428, f. 3, *Parthenos.*
1816. Hbn., Verzeichniss, 278, *Parthenos.*
1852. Gn., Spec. Gen., Noct., III, 80, *Parthenos.*
1857. Wlk., C. B. Mus., Het., XIII, 1179, *Parthenos.*
1869. Bethune, Can. Ent., I, 88, *Parthenos.*
1876. Grt., Ann. Lyc. Nat. Hist., N. Y., XI, 301, *Euparthenos.*
1877. Andrews, Can. Ent., IX, 20, *Catocalirrhus.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 30, 33, *Catocalirrhus.*

HABITAT.—Canada in July; United States east of the Rocky Mountains; Colorado; Massachusetts in June; New York in July.

§ CATOCALA Schrank.

C. elonympha Hbn.*

1818. Hbn., Zutræge, I, 11, f. 29, 30, *Ephesia.*
1816. Hbn., Verzeichniss, 280, *Allotria.*
1852. Gn., Spec. Gen., Noct., III, 37, pl. 15, f. 11, *Allotria.*
1857. Wlk., C. B. Mus., Het., XIII, 1216, *Allotria.*
1880. Grt., Can. Ent., XII, 85, *Allotria.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 24, 29, 33, *Catocala.*
amica ‡ Wlk.
1857. Wlk., C. B. Mus., Het., XIII, 1207, *Catocala.*
1868. G. & R., Trans. Am. Ent. Soc., II, 79, pr. syn.

HABITAT.—Canada; Middle and Southern States; District of Columbia in August.

C. messalina Gn.*

1852. Gn., Spec. Gen., Noct., III, 107, *Catocala.*
1857. Wlk., C. B. Mus., Het., XIII, 1209, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., IV, 19, *Catocala.*
1876. Harv., Can. Ent., VIII, 7. ? a *belfragiana.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 30, 34, *Catocala.*
belfragiana Harv.
1874. Harv., Bull. Buff. Soc. Nat. Sci., II, 28, *Catocala.*
1876. Harv., Can. Ent., VIII, 7, *Catocala.*
1880. Hulst, Bull. Bkln. Ent. Soc., III, 6, pr. syn.
1882. Grt., New List, 41, *Andrewsia.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 30, 34, pr. syn.
jocasta Strk.
1875. Strk., Lep. Rhop. et Het., 107, *Catocala.*
1876. Harv., Can. Ent., VIII, 7, pr. syn.

HABITAT.—Kansas to Texas in May.

Dr. Hulst states, from information, that Guenée's type is no longer in existence. Dr. Harvey's type is in the British Museum; Dr. Strecker's in his own collection.

C. amica Hbn.*

1818. Hbn., Zutræge, I, 14, f. 27, 28, *Ephesia.*
1816. Hbn., Verzeichniss, 279, *Corisce.*
1857. Wlk., C. B. Mus., Het., XIII, 1208, *Catocala.*

1872. Grt., Trans. Am. Ent Soc., IV, 18, sub nom. *androphila.*
1881. Coquillett, Papilio, I, 7, larva.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 29, 34, *Catocala.*
androphila Gn.
1852. Gn., Spec. Gen., Noct., III, 106, *Catocala.*
1857. Wlk., C. B. Mus., Het., XIII, 1208, pr. syn.
var. **lineella** Grt.*
1872. Grt., Trans. Am. Ent. Soc., IV, 18, *Catocala.*
1880. Hulst, Bull. Bkln. Ent. Soc., III, 6, pr. syn.
1882. Grt., Papilio, II, 9, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 34, pr. syn.
1892. Butler, Entomologist, XXV, 214, pr. syn.
var. **nerissa** Hy. Ed.
1880. Hy. Edw., Bull. Bkln. Ent. Soc., III, 61, pr. var.
1882. Grt., Papilio, II, 9, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 34, *Catocala.*

HABITAT.—Massachusetts in July and August; New York to Texas in June; Illinois; Central States.

The types of *nerissa* are in the Neumœgen and Edwards collections.

C. gracilis Edw.*

1864. Edw. (W. H.), Proc. Ent. Soc. Phil., II, 511, *Catocala.*
1877. Grt., Can. Ent., IX, 169, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 31, 35, *Catocala.*
similis ‡ Grt.
1872. Grt., Trans. Am. Ent. Soc., IV, 9, 17, *Catocala.*
1877. Grt., Can. Ent., IX, 170, pr. syn.
var. **sordida** Grt.
1877. Grt., Can. Ent., IX, 170, pr. var.
1882. Grt., Papilio, II, 9, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 35, *Catocala.*

HABITAT.—Canada in August; New York in July; Middle and Southern States.

C. minuta Edw.*

1864. Edw. (W. H.), Proc. Ent. Soc. Phil., II, 512, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., IV, 17, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc. VII, 37, *Catocala.*
var. **parvula** Edw.
1864. Edw. (W. H.), Proc. Ent. Soc. Phil., II, 512, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., IV, 17, pr. syn.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 35, pr. var.
var. **mellitula** Hulst.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 35, pr. var.

HABITAT.—Eastern and Middle States.

Dr. Hulst's type is in the Rutgers College collection.

C. olivia Hy. Edw.

1880. Hy. Edw., Bull. Bkln. Ent. Soc., II, 95, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 29, 35, *Catocala.*

HABITAT.—Texas.

The type is in the Neumœgen collection.

C. grynea Cram.*

1782. Cram., Pap. Ex., III, 29, pl. 208, f. H., *Phalæna.*
1811. Oliv., Enc. Meth., VIII, 291, *Noctua grinea.*
1816. Hbn., Verzeichniss, 278, *Ephesia.*
1857. Wlk., C. B. Mus., Het., XIII, 1205, *Catocala.*
1881. Grt., Can. Ent., XIII, 35, aberration.
1881. Kœbele, Bull. Bkln. Ent. Soc., IV, 22, larva.
1884. Bean, Can. Ent., XVI, 67, larva.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 35, *Catocala.*
polygama Gn. nec. Grt.
1852. Gn., Spec. Gen., Noct., III, 105, pl. 16, f. 2, *Catocala.*
1857. Wlk., C. B. Mus., Het., XIII, 1207, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 36, pr. syn.
nuptula Wlk.
1857. Wlk., C. B. Mus., Het., XIII, 1205, *Catocala.*
1868. G. & R., Trans. Am. Ent. Soc., II, 79, pr. syn.
var. **alabama** Grt.
1875. Grt., Proc. Ac. Nat. Sci. Phil., 1875, 427, *Catocala.*
1880. Hulst, Bull. Bkln. Ent. Soc., III, 6, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 36, pr. var.
ab. **constans** Hulst.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 37, aberr. pr.

HABITAT.—Atlantic and Central States; Massachusetts in July and August.

C. præclara G. & R.*

1866. G. & R., Proc. Ent. Soc. Phil., VI, 25, pl. IV, f. 4, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., IV, 17, *Catocala.*
1880. Hulst, Bull. Bkln. Ent. Soc., III, 7, var. *grynea.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 36, an sp. dist.

HABITAT.—Canada in August; New York in July; Eastern States July and August.

C. micronympha Gn.*

1852. Gn., Spec. Gen., Noct., III, 102, *Catocala.*
1857. Wlk., C. B. Mus., Het., XIII, 1204, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., IV, 15, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 29, *Catocala.*
fratercula G. & R.
1866. G. & R., Proc. Ent. Soc. Phil., VI, 24, pl. IV, f. 3, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., IV, 17, *Catocala.*
1873. Strk., Lep. Rhop. et Het., 37, pl. V, f. 8, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 37, pr. syn.
1891. Grt., Can. Ent., XXIII, 281, *Catocala.*
atarah Strk.
1874. Strk., Lep. Rhop. et Het., 97, pl. XI, f. 10 and 11, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 36, pr. syn.
var. **jacquenetta** Hy. Edw.
1880. Hy. Edw., Bull. Bkln. Ent. Soc., III, 60, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 36, pr. var.
var. **timandra** Hy. Edw.
1880. Hy. Edw., Bull. Bkln. Ent. Soc., III, 60, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 37, pr. var.

var. **hero** Hy. Edw.
1884. Hy. Edw., Papilio, IV, 125, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 37, pr. var.
var. **gisela** Meyer.
1880. Meyer, Bull. Bkln. Ent. Soc., II, 96, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 37, pr. var.

HABITAT.—Canada and Massachusetts in August; Rhode Island; New York; Georgia; Florida; Texas in June; Illinois; Arizona; Colorado; California.

The type of *fratercula* is in the collection of the American Entomological Society; that of *atarrah* is with Mr. Strecker; those of *jacquenetta* are in the Lintner and Edwards collections; that of *timandra* is with Mr. Neumœgen; that of *hero* is in the Edwards collection, and, finally, that of *gisela* is in the Meyer collection.

C. **similis** Edw.*

1864. Edw. (W. H.), Proc. Ent. Soc. Phil., II, 511, *Catocala.*
1872. Grt., Trans. Am. Ent Soc., IV, 17,=*gracilis* (err.)
1872. Grt., Can. Ent., IX, 169, *Catocala.*
1881. Grt., Papilio, I, 159, *Catocala.*
1884. Grt., Bull. Bkln. Ent. Soc., VII, 29, 37, *Catocala.*
amasia ‡ S. & A.
1797. S. & A., Ins. Ga., II, 179, pl. 90, lower figure, *Phalæna.*
1852. Gn., Spec. Gen., Noct., III, 103, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 37, pr. syn.
formula G. & R.
1866. G. & R., Proc. Ent. Soc. Phil., VI, 27, pl. IV, f. 5, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., IV, 16, *Catocala.*
1882. Grt., New List, 40, pr. syn.
var. **aholah** Strk.
1874. Strk., Lep. Rhop. et Het., 96, pl. XI, f. 8, *Catocala.*
1880. Hulst, Bull. Bkln. Ent. Soc., III, 6, an var. *formula.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 37. pr. var.
var. **isabella** Hy. Edw.
1880. Hy. Edw., Bull. Bkln. Ent. Soc., III, 60, var. *formula.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 37, pr. var.

HABITAT.—Rhode Island; New York in August, to Texas in May and June.

C. **chelidonia** Grt.

1881. Grt., Papilio, I, 159, *Catocala.*
1882. Grt., Ill. Essay, 67, pl. IV, f. 42, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 29, 37, *Catocala.*

HABITAT.—Arizona.

The type is in the Neumœgen collection.

C. **amasia** S. & A.*

1797. S. & A., Ins. Ga., II, 178, pl. 90. (upper figure), *Phalæna.*
1811. Oliv., Enc. Meth., VIII, 291, *Noctua.*
1841. Westw., in Jardine Nat. Libr., xxxvii, 205, pl. 26, f. 3, *Catocala.*
1852. Gn., Spec. Gen., Noct., III, 103, *Catocala.*
1857. Wlk., C. B. Mus., Het., XIII, 1204, *Catocala.*

1884. Hulst, Bull. Bkln. Ent. Soc., VII, 37, *Catocala.*
cordelia Hy. Edw.
1880. Hy. Edw., Bull. Bkln. Ent. Soc., VIII, 59, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 37, pr. syn.
var. **virens** French.
1886. French, Can. Ent., XVIII, 162, pr. var.

HABITAT.—New York; Illinois; Georgia; Texas.

Types of *cordelia* are in the Bailey and Edwards collections. The type of *virens* is with Prof. French.

C. sancta Hulst.

1884. Hulst, Bull. Bkln. Ent. Soc., VII, 38, *Catocala.*
amasia ‡ Grt.
1872. Grt., Trans. Am. Ent. Soc., IV, 16, *Catocala.*
1874. Strk., Lep. Rhop. et Het., 77, pl. IX, f. 12, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 38, pr. syn.

HABITAT.—Eastern to Southern States.

C. connubialis Gn.

1852. Gn., Spec. Gen., Noct., III, 105, *Catocala.*
1857. Wlk., C. B. Mus., Het., XIII, 1207, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., IV, 16, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 38,= *sancta.*

HABITAT.—Georgia.

Dr. Hulst cites this species, as well as *amasia* ‡ Grt., to *sancta*, perhaps not justly. There is really no evidence that Guenée intended the *amasia* ‡, and, indeed, Dr. Hulst says the description does not fit. It should not therefore be cited as a synonym to *sancta*, which it must otherwise replace. Guenée's species based on Abbot's figures have been universally accepted, and if the figures are still in existence there is no reason why positive knowledge should not be yet obtainable.

C. dulciola Grt.

1881. Grt., Papilio, I, 5, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 29, 38, *Catocala.*

HABITAT.—Ohio, June 1; Illinois.

The type is in the Edwards collection.

C. cratægi Saund.*

1876. Saund., Can. Ent., VIII, 72, *Catocala.*
1880. Hulst, Bull. Bkln. Ent. Soc., III, 7,= *polygama* var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 29, 38, sp. dist.
var. **pretiosa** Lint.
1876. Lint., Can. Ent., VIII, 121, *Catocala.*
1878. Lint., Ent. Cont., IV, 100, *Catocala.*
1880. Hulst, Bull. Bkln. Ent. Soc., III, 7, *polygama* var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 38, pr. syn.

HABITAT.—Canada; New York, in July; Northern and Eastern States.

Dr. Lintner's type is in his own collection.

C. blandula Hulst.*

1884. Hulst, Bull. Bkln. Ent. Soc., vii, 38, *Catocala.*
polygama ‡ Grt.
1872 Grt., Trans. Am. Ent. Soc., iv, 15, *Catocala.*
1869. Reed, Can. Ent., ii, 30, larva.
1876. Saund., Can. Ent., viii, 72, larva.
1878. Lint., Ent. Cont., iv, 101, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., vii, 39, pr. syn.

Habitat.—Northern, Eastern, and Middle States; Canada, in July and August.

C. mira Grt.*

1876. Grt., Can. Ent., viii, 230, *Catocala.*
1880. Hulst, Bull. Bkln. Ent. Soc., iii, 7, an var. *polygama.*
1882. Grt., Ill. Essay, 70, pl. 4, f. 43, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., vii, 29, 39, sp. dist.

Habitat.—Southern States; Florida; Kansas.

C. abbreviatella Grt.*

1872. Grt., Trans. Am. Ent. Soc., iv, 14, *Catocala.*
1877. Grt., Can. Ent., ix, 169, *Catocala.*
1880. Hulst, Bull. Bkln. Ent. Soc., iii, 7,= *nuptialis.*
1882. Grt., Ill. Essay, 66, pl. iv, f. 40, *Catocala.*
1884. Angus, Papilio, iv, 37, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., vii, 39, *Catocala.*
var. **whitneyi** Dodge.
1874. Dodge, Can. Ent., vi, 125, *Catocala.*
1880. Hulst, Bull. Bkln. Ent. Soc., iii, 7, *abbreviatella* var.
1884. Angus, Papilio, iv, 37, an sp. dist.
1884. Hulst, Bull. Bkln. Ent. Soc., vii, 39, pr. var.

Habitat.—Illinois; Iowa; Minnesota; Kansas; Nebraska; Utah; Texas.

C. nuptialis Wlk.*

1857. Wlk., C. B. Mus., Het., iii, 1206, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., iv, 14, *Catocala.*
1875. Grt., Bull. Buff. Soc. Nat. Sci., ii, 222, *Catocala.*
1884. Angus, Papilio, iv, 37, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., vii, 30, 39, *Catocala.*
myrrha Strk.
1874. Strk., Lep. Rhop. et Het., 97, pl. xi, f. 12, *Catocala.*
1875. Grt., Bull. Buff. Soc. Nat. Sci., ii, 222, pr. syn.

Habitat.—Illinois in August; Nebraska to Texas; Colorado.

C. clintonii Grt.*

1865. Grt., Proc. Ent. Soc. Phil., iii, 89, pl. iii, f. 4, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., iv, 13, *Catocala.*
1873. Strk, Lep. Rhop. et Het., 35, pl. v, f. 6, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., vii, 30, 39, *Catocala.*
var. **helene** Pilate.
1882. Pilate, Papilio, ii, 31, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., vii. 39, pr. syn.

Habitat.—Canada, Middle and Central States, in July; Texas, in April and May; Florida.

C. frederici Grt.*

1872. Grt., Trans. Am. Ent. Soc., IV, 14, *Catocala.*
1877. Grt., Can. Ent., IX, 168, *Catocala.*
1882. Grt., Ill. Essay, 71, pl. IV, f. 44, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 31, 40, *Catocala.*

HABITAT.—Texas; New Mexico; Colorado.

C. illecta Wlk.*

1857. Wlk., C. B. Mus., Het., XIII, 1205, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., IV, 13, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 40, *Catocala.*
magdalena Strk.
1874. Strk., Lep. Rhop. et Het., 93, pl. XI, f. 9, *Catocala.*
1874. Grt., Can. Ent., VI, 199, pr. syn.
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 222, pr. syn.

HABITAT.—Illinois; Nebraska; Texas.

C. amestris Strk.

1874. Strk., Lep. Rhop. et Het., 96, pl. XI, f. 6, *Catocala.*
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 222, = *anna.*
1881. Grt., Papilio, I, 161, = *anna.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 40, *Catocala.*
anna Grt.
1874. Grt., Trans. Am. Ent. Soc., V, 96, *Catocala.*
1875. Strk., Lep. Rhop. et Het., 105, pr. syn.
1877. Grt. Can. Ent., IX, 168, *Catocala.*
1880. Hulst, Bull. Bkln. Ent. Soc., III, 8, pr. syn.
1881. Hulst, Papilio, I, 215, pr. syn.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 40, pr. syn.
var. **westcottii** Grt.
1878. Grt., Can. Ent., X, 195, *Catocala.*
1882. Grt., Papilio, II, 9, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 40, pr. syn.

HABITAT.—Wisconsin; Illinois; Nebraska; Texas.

C. consors S. & A.*

1797. S. & A., Ins. Ga., II, 177, pl. 89, *Phalæna.*
1811. Oliv., Enc. Meth., VIII, 290, *Noctua.*
1841. Duncan, in Jardine's Nat. Libr., XXXII, 206, *Catocala.*
1852. Gn., Spec. Gen., Noct., III, 99, *Catocala.*
1857. Wlk., C. B. Mus., Het., XIII, 1204, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., IV, 11, *Catocala.*
1874. Strk., Lep. Rhop. et Het., 75, pl. IX, f. 10, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 40, *Catocala.*

HABITAT.—Pennsylvania, southward; Mississippi; Texas.

* **C. andromache** Hy. Edw.

1885. Hy. Edw., Ent. Amer., I, 50, *Catocala.*

HABITAT.—California.
The types are in the Neumœgen and Edwards collections.

C. delilah Strk.*

1874. Strk., Lep. Rhop. et Het., 96, pl. XI, f. 7, *Catocala.*
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 222,=*adoptiva.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 31, 41, *Catocala.*
adoptiva Grt.
1874. Grt., Trans. Am. Ent. Soc., V, 96, *Catocala.*
1875. Strk., Lep. Rhop. et Het., 105, pr. syn.
1880. Hulst, Bull. Bkln. Ent. Soc., III, 10, pr. syn.
1881. Grt., Papilio, I, 161, an nom. prior.
1881. Hulst, Papilio, I, 215, pr. syn.
var. **desdemona** Hy. Edw.
1882. Edw., Papilio, II, 15, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 41, pr. var.
var. **calphurnia** Hy. Edw.
1880. Hy. Edw., Bull. Bkln. Ent. Soc., III, 59, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 41, pr. var.

HABITAT.—Illinois; Nebraska; Kansas; Arizona; Texas, in May. Dr. Strecker's type is in his own collection; the type of *desdemona* is in the Neumœgen collection; that of *calphurnia* is in the Bailey collection.

C. cerogama Gn.*

1852. Gn., Spec. Gen., Noct., III, 96, *Catocala.*
1857. Wlk., C. B. Mus., Het., XIII, 1202, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., IV, 9, *Catocala.*
1873. Strk., Lep. Rhop. et Het., 23, pl. III, f. 10, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 30, 41, *Catocala.*
aurella Fischer.
1885.. Fischer, Can. Ent., XVII, 133, *Catocala.*
eliza Fischer.
1885. Fischer, Can. Ent., XVII, 134, *Catocala.*
var. **bunkeri** Grt.
1876. Grt., Can. Ent., VIII, 230, var. pr.
1880. Hulst, Bull. Bkln. Ent. Soc., III, 10, pr. var.
1882. Grt., Papilio, II, 9, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 41, pr. syn.

HABITAT.—Canada; Eastern, Middle, and Central States; Maryland, July to September.

C. verrilliana Grt.*

1875. Grt., Can. Ent., VII, 185, *Catocala.*
1875. Grt., Bull. Buff. Soc. Nat. Sci., III, 12, 217, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 30, 41, *Catocala.*
ophelia Hy. Edw.
1880. Hy. Edw., Bull. Bkln. Ent. Soc., II, 95, pr. var.
1880. Hy. Edw., Bull. Bkln. Ent. Soc., III, 58, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 41, pr. syn.
var. **violenta** Hy. Edw.
1880. Hy. Edw., Bull. Bkln. Ent. Soc., III, 58, *Catocala.*
1883. Grt., Trans. Kans. Ac. Sci., VIII, 50, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 41, pr. syn.
var. **votiva** Hulst.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 41, pr. var.

HABITAT.—Colorado in October; Texas, April, May, and June; New Mexico; Arizona; California.

Types of *ophelia* and *violenta* are in Mr. Neumœgen's collection, and in the Edwards collection is another type of *violenta*

C. **ultronia** Hbn.*

1818. Hbn., Zuträge, II, 26, f. 347, 348, *Eunetis*.
1816. Hbn., Verzeichniss, 277, *Eunetis*.
1852. Gn., Spec. Gen., Noct., III, 89, *Catocala*.
1857. Wlk., C. B. Mus., Het., XIII, 1197, *Catocala*.
1869. Pack., Guide to Study Ins., 317, pl. VIII, f. 4, *Catocala*.
1872. Grt., Trans. Am. Ent. Soc., IV, 6, *Catocala*.
1874. Strk., Lep. Rhop. et Het., 75, pl. IX, f. 7, *Catocala*.
1874. Saund., Can. Ent., VI, 147, *Catocala*.
1880. Saund., Can. Ent., XII, 4, *Catocala*.
1883. Saund., Fruit Insects, 177, f. 188, 189, *Catocala*.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 30, 42, *Catocala*.
1884. Bean, Can. Ent., XVI, 67, *Catocala*.
var. **celia** Hy. Edw.*
1880. Hy. Edw., Bull. Bkln. Ent. Soc., III, 58, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 42, pr. var.
var. **mopsa** Hy. Edw.
1880. Hy. Edw., Bull. Bkln. Ent. Soc., III, 58, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 43, pr. var.
var. **adriana** Hy. Edw.
1880. Hy. Edw., Bull. Bkln. Ent. Soc., III, 57, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 43, pr. var.
var. **herodias** Strk.
1876. Strk., Lep. Rhop. et Het., 121, *Catocala*.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 42, pr. var.

HABITAT.—Canada to Florida, and Texas, west to the great plains. July and August.

A type of *celia* is with Mr. Neumœgen. Types of *celia*, *mopsa*, and *adriana* are in the Edwards collection.

C. **coccinata** Grt.*

1872. Grt., Trans. Am. Ent. Soc., IV, 6, *Catocala*.
1873. Strk., Lep. Rhop. et Het., 21, pl. 3, f. 9, *Catocala*.
1881. Coquillett, Papilio, I, 56, *Catocala*.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 30, 42, *Catocala*.
circe Strk.
1876. Strk., Lep. Rhop. et Het., 121, pr. var.
1880. Hy. Edw., Bull. Bkln. Ent. Soc., III, 57, an sp. dist.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 42, pr. syn.
var. **sinuosa** Grt.
1879. Grt., Bull. Bkln. Ent. Soc., I, 77, *Catocala*.
1879. Grt., Can. Ent., XI, 15, *Catocala*.
1880. Hulst, Bull. Bkln. Ent. Soc., III, 11, pr. var.
1882. Grt., Papilio, II, 8, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 42, pr. var.

HABITAT.—Canada to Florida, to Texas; Illinois; Central States; Canada and New York, July to September.

C. ilia Cram.*

1779. Cram., Lep. Ex., I, 53, pl. 33, f. *B. C.*, *Phalæna.*
1810. Oliv., Enc. Meth., VIII, 286, *Noctua.*
1816. Hbn., Verzeichniss, 277, *Eunetis.*
1852. Gn., Spec. Gen., Noct., III, 91, *Catocala.*
1857. Wlk., C. B. Mus., Het., XIII, 1199, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., IV, 8, *Catocala.*
1875. Caulfield, Can. Ent., VII, 208, larva.
1882. Koebele, Bull. Bkln. Ent. Soc., V, 22, larva.
1883. Worthington, Papilio, III, 40, *Catocala.*
1884. French, Can. Ent., XVI, 12, life history.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 30, 42, *Catocala.*

var. **uxor** Gn.*

1852. Gn., Spec. Gen., Noct., III, 92, *Catocala.*
1857. Wlk., C. B. Mus., Het., XIII, 1199, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., IV, 8, ? pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 42, pr. var.

umbrosa Worth.

1883. Worthington, Papilio, III, 40, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 42, pr. syn.

confusa Worth.

1883. Worthington, Papilio, III, 40, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 42, pr. syn.

decorata Worth.

1883. Worthington, Papilio, III, 40, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 42, pr. syn.

obsoleta Worth.

1883. Worthington, Papilio, III, 40, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 42, pr. syn.

duplicata Worth.

1883. Worthington, Papilio, III, 40, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 42, pr. syn.

conspicua Worth.

1883. Worthington, Papilio, III, 40, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 42, pr. syn.

var. **zoe** Behr.

1870. Behr, Trans. Am. Ent. Soc., III, 24, *Catocala.*
1875. Hy. Edw., Proc. Cal. Ac. Sci., VI, 214, *Catocala.*
1880. Hulst, Bull. Bkln. Ent. Soc., III, 10, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 43, pr. var.

var. **osculata** Hulst.

1884. Hulst, Bull. Bkln. Ent. Soc., VII, 43, pr. var.

HABITAT.—Canada; United States generally. Canada and Eastern States, July to September.

C. aholibah Strk.*

1874. Strk., Lep. Rhop. et Het., 72, pl. IX, f. 5, *Catocala.*
1875. Hy. Edw., Proc. Cal. Ac. Sci., VI, 213, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 31, 43, *Catocala.*

HABITAT.—California; Washington; Oregon; Colorado in August; New Mexico.

C. **marmorata** Edw.*

1864. Edw. (W. H.), Proc. Ent. Soc. Phil., ii, 508, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., iv, 7, *Catocala.*
1874. Strk., Lep. Rhop. et Het., 73, pl. ix, f. 6, *Catocala.*
1875. Hy. Edw., Proc. Cal. Ac. Sci., vi, 212, *Catocala.*
1877. Angus, Can. Ent., ix, 239, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., vii, 43, 30, *Catocala.*
1887. Angus, Ent. Amer., iii, 3, *Catocala.*

HABITAT.—New York; Ohio; Kentucky; California. Found in isolated specimens throughout the United States.

C. **parta** Gn.*

1852. Gn., Spec. Gen., Noct., iii, 84, pl. xvi, f. 1, *Catocala.*
1857. Wlk., C. B. Mus., Het., xiii, 1193, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., iv, 6, *Catocala.*
1874. Strk., Lep. Rhop. et Het., 38, pl. v, f. 10, *Catocala.*
1883. Hy. Edw., Papilio, iii, 24, larva.
1884. Hulst, Bull. Bkln. Ent. Soc., vii, 30, 43, *Catocala.*
amatrix ‡ Wlk.
1857. Wlk., C. B. Mus., Het., xiii. 1195, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., iv, 6, pr. syn.
var. **perplexa** Strk.
1874. Strk., Lep. Rhop. et Het., 38, pl. v, f. 11, *Catocala.*
1880. Hulst, Bull. Bkln. Ent. Soc., iii, 10, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., vii, 43, pr. syn.
var. **petulans** Hulst.
1884. Hulst, Bull. Bkln. Ent. Soc. vii, 43, pr. var.

HABITAT.—Eastern and Northern United States, July to October; Canada, July to September; Hudson's Bay territory; Colorado.

C. **unijuga** Wlk.*

1857. Wlk., C. B. Mus., Het., xiii, 1194, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., iv, 5, *Catocala.*
1874. Strk., Lep. Rhop. et Het., 37, pl. v, f. 9, *Catocala.*
1880. Hy. Edw., Bull. Bkln. Ent. Soc., iii, 55, *Catocala.*
1881. Kellicott, Can. Ent., xiii, 38, larva on *Populus.*
1883. Bunker, Can. Ent., xv, 100, larva on *Willow.*
1884. Hulst, Bull. Bkln. Ent. Soc., vii, 44, *Catocala.*
junctura ‡ Grt.
1872. Grt., Trans. Am. Ent. Soc., iv, 5, *Catocala.*
1877. Grt., Can. Ent., ix, 168, *Catocala.*
1880. Hulst, Bull. Bkln. Ent. Soc., iii, 10, pr. syn.
1880. Hy. Edw., Bull. Bkln. Ent. Soc., iii, 56, var. *unijuga.*
1884. Hulst, Bull. Bkln. Ent. Soc., vii, 44, pr. syn.
lucilla Worth.
1883. Worthington, Papilio, iii, 39, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., vii, 44, pr. syn.
var. **meskei** Grt.
1873. Grt., Can. Ent., vi, 161, 233, *Catocala.*
1874. Strk., Lep. Rhop. et Het., 70, pr. syn.
1877. Grt., Can. Ent., ix, 168, *Catocala.*
1880. Hulst, Bull. Bkln. Ent. Soc., iii, 10, pr. var.

1880. Edw., Bull. Bkln. Ent. Soc., III, 55, *Catocala.*
1883. Bunker, Can. Ent., XV, 100, larva.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 44, pr. var.
var. **beaniana** Grt.
1878. Grt., Can. Ent., X, 195, *Catocala.*
1880. Hulst, Bull. Bkln. Ent. Soc., III, 11, var. *briseis.*
1880. Hy. Edw., Bull. Bkln. Ent. Soc., III, 55, an sp. dist.
1882. Grt., Ill. Essay, 67, pl. IV, f. 42, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII. 44, pr. var.

HABITAT.—New York to Illinois to Hudson's Bay territory; Northern and Eastern States, July to September; Colorado.

C. pura Hulst.*

1880. Hulst, Bull. Bkln. Ent. Soc., II, 96, *Catocala.*
1881. Grt., Papilio, I, 163, = *semirelicta.*
1881. Grt., Trans. Kans. Ac. Sci., VII, 69, = *semireliota.*
1881. Hulst, Papilio, I, 163, an sp. dist.
1883. Grt., Can. Ent., XV, 11, = *semirelicta.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 30, 44, sp. dist.

HABITAT.—Kansas; Colorado in October; New Mexico.

The type is in the Hulst collection.

C. stretchii Behr.

1870. Behr, Trans. Am. Ent. Soc., III, 24, *Catocala.*
1875. Hy. Edw., Proc. Cal. Ac. Sci., VI, 212, *Catocala.*
1877. Strk., Lep. Rhop. et Het., 130, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 30, 44, *Catocala.*
var. **portia** Hy. Edw.
1880. Hy. Edw., Bull. Bkln. Ent. Soc., II, 94, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 45, pr. var.
var. **augusta** Hy. Edw.
1875. Hy. Edw., Proc. Cal. Ac. Sci., VI, 184, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 45, pr. var.
var. **hippolyta** Hy. Edw.
1875. Hy. Edw., Proc. Cal. Ac. Sci., VI, 211, *Catocala.*
1874. Hy. Edw., in Strk. Rhop. et Het., 99, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 45, pr. var.
jessica Hy. Edw.
1877. Hy. Edw., Pacific Coast Lep. No. 25, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 45, pr. syn.

HABITAT.—California; Arizona; Nevada; Colorado.

Mr. Edwards's types are, I believe, all in his own collection.

C. rosalinda Hy. Edw.

1880. Hy Edw., Bull. Bkln. Ent. Soc., III, 55, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 31, 45, *Catocala.*

HABITAT.—Colorado; Kansas.

Types are in the Bailey and Edwards collections.

C. faustina Strk.*

1873. Strk., Lep. Rhop. et Het., 21, pl. III, f. 8, *Catocala.*
1874. Grt., Proc. Bost. Soc. N. H., XVI, 243, *Catocala.*

1875. Hy. Edw., Proc. Cal. Ac. Sci., VI, 210, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 31, 45, *Catocala.*
perdita Hy. Edw.
1874. Hy. Edw., in Strk. Lep. Rhop. et Het., 100, *Catocala.*
1877. Strk., Lep. Rhop. et Het., 129, *Catocala.*
1880. Hulst, Bull. Bkln. Ent. Soc., III, 10, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 45, pr. syn.
zillah Strk.
1877. Strk., Lep. Rhop. et Het., 129, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 45, pr. syn.
var. **verecunda** Hulst.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 45, pr. var.
var. **allusa** Hulst.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 45, *Catocala.*
1891. Hulst, in Smith's List Lep., 59, pr. var.

HABITAT.—Michigan; Nevada; Montana; Colorado in October; Washington; California; Arizona; New Mexico; Utah.

The types are in each case in the collections of the describers, except that the type of *allusa* is with Mr. Graef.

C. mariana Hy. Edw.*

1874. Hy. Edw., in Strk., Lep., Rhop. et Het., 99, *Catocala.*
1875. Hy. Edw., Proc. Cal. Ac. Sci., VI, 210, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 31, 45, *Catocala.*
var. **francisca** Hy. Edw.
1880. Hy. Edw., Bull. Bkln. Ent. Soc., III, 57, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 45, pr. var.

HABITAT.—California; Colorado in October.

The types are in the Edwards collection; a type of the variety also with Mr. Neumœgen.

C. briseis Edw.*

1864. Edw. (W. H.), Proc. Ent. Soc., Phil., II, 508, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., IV, 5, *Catocala.*
1873. Strk., Lep. Rhop. et Het., 20, pl. 3, f. 7, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 30, 45, *Catocala.*
parta ‡ Wlk.
1857. Wlk., C. B. Mus., Het., XIII, 1193, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., IV, 5, pr. syn.
var. **groteiana** Bailey.*
1879. Bailey, North Amer. Ent., I, 21, *Catocala.*
1880. Hulst, Bull. Bkln. Ent. Soc., III, 11, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 46, pr. var.
var. **semirelicta** Grt.
1874. Grt., 6th Rept. Peab. Ac. Sci., 35, *Catocala.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, pl. 1, f. 11, *Catocala.*
1876. Strk., Lep. Rhop. et Het., 121, pr. syn.
1880. Hulst, Bull. Bkln. Ent. Soc., III, 11, pr. var.
1881. Grt., Papilio, I, 163, an sp. dist.
1881. Hulst, Papilio, I, 218, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 46, pr. var.

HABITAT.—Canada; Northern, Eastern, and Middle States, July to September; Colorado in October; New Mexico.

A specimen of *briseis* labeled by Mr. W. H. Edwards is in the collection of the American Entomological Society; but I am not certain that it is the type. The type of *groteiana* is in the Bailey collection.

C. hermia Hy. Edw.*

1880. Hy. Edw., Bull. Bkln. Ent. Soc., II, 93, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 31, 46, *Catocala.*

HABITAT.—Colorado; New Mexico.

The type is in the Edwards collection.

C. electilis Wlk.*

1857. Wlk., C. B. Mus., Het., XIII, 1209, *Catocala.*
1881. Butler, Papilio, I. 171, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 31, 46, *Catocala.*
var. **californica** Edw.*
1861. Edw. (W. H.), Proc. Ent. Soc. Phil., II, 509, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., IV, 5, *Catocala.*
1874. Strk., Lep. Rhop. et Het., 98, pl. 11, f. 13, *Catocala.*
1875. Hy. Edw., Proc. Cal. Ac. Sci., VI, 211, *Catocala.*
1880. Hy. Edw., Bull. Bkln. Ent. Soc., III, 55, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 40, pr. var.
var **cleopatra** Hy. Edw.
1874. Hy. Edw., in Strk. Lep. Rhop. et Het., 99, *Catocala.*
1875. Hy. Edw., Proc. Cal. Ac. Sci., VI, 209. *Catocala.*
1880. Hulst, Bull. Bkln. Ent. Soc., III, 11, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 46, pr. var.
var. **irene** Behr.
1870. Behr, Trans. Am. Ent. Soc., III, 24, *Catocala.*
1875. Hy. Edw., Proc. Cal. Ac. Sci., VI, 211, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 46, pr. var.
virgilia, Hy. Edw.
1880. Hy. Edw., Bull. Bkln. Ent. Soc., III, 56, var. *irene.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 46, pr. syn.
var. **volumnia** Hy. Edw.
1880. Hy. Edw., Bull. Bkln. Ent. Soc., III, 56, var. *irene.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 46, pr. var.
var **valeria** Hy. Edw.
1880. Hy. Edw., Bull. Bkln. Ent. Soc., III, 56, var. *irene.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 46, pr. syn.

HABITAT.—California; Mexico; Colorado; Arizona; Nevada.

Walker's type is probably in the British Museum. The type of W. H. Edwards's species is in the collection of the American Entomological Society. The types of the described varieties are in Mr. Hy. Edwards's collection; types of *virgilia* and *valeria* also with Mr. Neumœgen.

C. luciana Hy. Edw.

1874. Hy. Edw., in Strk., Lep., Rhop. et Het., 99, *Catocala.*
1875. Hy. Edw., Proc. Cal. Ac. Sci., VI, 211. *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 31, 47, *Catocala.*
nebraskæ Dodge.
1875. Dodge, Can. Ent., VII, 2, *Catocala.*

1880. Hy. Edw., Bull. Bkln. Ent. Soc., III, 54, pr. syn.
var somnus Dodge.
1881. Dodge, Can. Ent., XII, 40, var. *nebraskæ*.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 46, pr. var.

HABITAT.—Colorado; Kansas; Nebraska.

The type of *luciana* is the Edwards collection.

C. concumbens Wlk.*

1857. Wlk., C. B. Mus., Het., XIII, 1198, *Catocala*.
1863. Saund., Proc. Ent. Soc. Phil., III, 29, larva.
1872. Grt., Trans. Am. Ent. Soc., IV, 7, *Catocala*.
1873. Strk., Lep. Rhop. et Het., 38, pl. 5, f. 12, *Catocala*.
1875. Strk., Lep. Rhop. et Het., 106, *Catocala*.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 31, 47, *Catocala*.
var. **diana** Hy. Edw.
1880. Hy. Edw., Bull. Bkln. Ent. Soc., III, 57, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 47, pr. var.
aberr. **hillii** Grt.
1883. Grt., Papilio, III, 43, an aberr. pr.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 47, aberr. pr.

HABITAT.—Canada; Northern, Eastern, and Middle States, August and September.

The type of *diana* is in the Allen collection, that of *hillii* is in the Hill collection.

C. cara Gn.*

1852. Gn., Spec. Gen., Noct., III, 87, *Catocala*.
1857. Wlk., C. B. Mus., Het.. XIII, 1196, *Catocala*.
1872. Grt., Trans. Am. Ent. Soc., IV, 7, *Catocala*.
1875. Strk., Lep. Rhop. et Het., 98, pl. XI, f. 14, *Catocala*.
1880. Kœbele, Bull. Bkln. Ent. Soc., III, 22, larva.
1882. French, Papilio, II, 167, life history.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 31, 47, *Catocala*.
var. **carissima** Hulst.*
1880. Hulst, Bull. Bkln. Ent. Soc., II, 97, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc. VII, 47, pr. var.
sylvia Hy. Edw.
1880. Hy. Edw., Bull. Bkln. Ent. Soc., III, 57, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 47, =*carissima*.

HABITAT.—Canada to Florida; Southern and Central States, Texas, Northern and Central States, August to October.

The type of *carissima* is in the Hulst collection; that of *sylvia* is in the Edwards collection.

C. amatrix Hbn.*

1810. Hbn., Samml. Ex. Schmett., II, Noct. f. 427, *Lamprosia*.
1816. Hbn., Verzeichniss, 277, *Lamprosia*.
1852. Gn., Spec. Gen., Noct., III, 86, *Catocala*.
1857. Wlk., C. B. Mus., Het., XIII, 1195, *Catocala*.
1872. Grt., Trans. Am. Ent. Soc., IV, 7, *Catocala*.
1875. Strk., Lep. Rhop. et Het., 98, pl. XI, f. 15, 16, *Catocala*.
1881. Kellicott, Papilio, I, 142, larva.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 31, 47, *Catocala*.

1884. French, Papilio, IV, 8, life history.
selecta Wlk.
1857. Wlk., C. B. Mus., Het., XIII, 1197, *Catocala.*
1868. G. & R., Trans. Am. Ent. Soc., II, 79, pr. syn.
1872. Grt., Trans. Am. Ent. Soc., IV, 7, pr. syn.
parta ‡ Wlk.
1857. Wlk., C. B. Mus., Het., XIII, 1193, *Catocala.*
1868. G. & R., Trans. Am. Ent. Soc., II, 79, pr. syn.
editha Edw.
1874. Edw. (W. H.), Trans. Am. Ent. Soc., V, 112, *Catocala.*
1876. Mead, in Wheeler's Rept. Surv. West 100 Merid., V, 790, *Catocala.*
1880. Hulst, Bull. Bkln. Ent. Soc., III, 12, pr. syn.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 47, pr. syn.
var. **nurus** Wlk.
1857. Wlk., C. B. Mus., Het., XIII, 1197, *Catocala.*
1868. G. & R., Trans. Am. Ent. Soc., II, 79, pr. syn.
1872. Grt., Trans. Am. Ent. Soc., IV, 7, pr. syn.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 48, pr. var.

HABITAT.—Nova Scotia to Texas, to Florida; Arizona; Colorado in August; Northern range, August to October.

C. junctura Wlk.*

1857. Wlk., C. B. Mus., Het., XIII, 1196, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., IV, 5, *Catocala.*
1880. Hy. Edw., Bull. Bkln. Ent. Soc., III, 56, an var. *unijuga.*
1882. Grt., Can. Ent., XIV, 47, *Catocala.*
1883. Grt., Can. Ent., XV, 12, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 31, 48, *Catocala.*
walshii Edw.
1861. Edw. (W. H.), Proc. Ent. Soc. Phil., II, 509, *Catocala.*
1873. Grt., Can. Ent., V, 163, 233, *Catacola.*
1880. Hy. Edw., Bull. Bkln. Ent. Soc., III, 55, *Catocala.*
1881. Grt., Papilio, I, 163, *Catocala.*
1881. Hulst, Papilio, I, 218, *Catocala.*
1882. Grt., Can. Ent., XIV, 47, pr. syn.
1883. Grt., Can. Ent., XV, 12, pr. syn.
1884. Strk., Papilio, IV, 74, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 48, pr. syn.
1886. French, Can. Ent., XVIII, 161, an var..dist.
var. **arizonæ** Grt.
1873. Grt., Can. Ent., V, 163, 233, *Catocala.*
1880. Hulst, Bull. Bkln. Ent. Soc., III, 12, =*walshii.*
1881. Grt., Can. Ent., XIII, 232, an sp. dist.
1883. Grt., Can. Ent., XV, 12, an sp. dist.
1884. Strk., Papilio, IV, 74, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 48, pr. var.
var. **aspasai** Strk.
1874. Strk., Lep. Rhop. et Het., 94, *Catocala.*
1874. Grt., Can. Ent., VI, 199, = *arizonæ.*
1883. Grt., Can. Ent., XV, 12, pr. syn.
1884. Strk., Papilio, IV, 74, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 48, pr. var.
var. **cassandra** Hy. Edw.
1875. Hy. Edw., Proc. Cal. Ac. Sci., VI, 214, *Catocala.*

1880. Hy. Edw., Bull. Bkln. Ent. Soc., III, 56, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 48, pr. var.
sara French.
1883. French, Can. Ent., XV, 163, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 48, =*cassandra.*

HABITAT.—Texas to California; Colorado; Utah; New Mexico.

The type of *junctura* is in the British Museum; that of *walshii* is, I believe, destroyed; that of *arizonæ* is in the collection of the American Entomological Society; that of *aspasia* is in the Strecker collection; that of *cassandra* is in the Edwards collection, while that of *sara* is, I believe, with Prof. French.

This species has made as much bad blood as almost any other American noctuid, and even now the synonomy above given will probably be questioned by some.

C. **babayaga** Strck.

1884. Strk., Papilio, IV, 73, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 48, *Catocala.*
arizonæ ‡ Grt.
1881. Grt., Can. Ent., XIII, 232, *Catocala.*
1883. Grt., Can. Ent., XV, 12, *Catocala.*
1884. Strk., Papilio, IV, 73, pr. syn.

HABITAT.—Arizona.

The type is with Dr. Strecker.

C. **relicta** Wlk.*

1857. Wlk., C. B. Mus., Het., XIII, 1192, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., IV, 4, *Catocala.*
1873. Strk., Lep. Rhop. et Het., 19, pl. III, f. 5 and 6, *Catocala.*
1875. Grt., Can. Ent., VII, 186, *Catocala.*
1876. Grt., Can. Ent., VIII, 231, *Catocala.*
1876. Grt., Ann. Lyc. Nat. Hist. N. Y., XI, 301, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 31, 48, *Catocala.*
1886. French, Can. Ent., VIII, 162, *Catocala.*
1888. Clark, Can. Ent., XX, 17, life history.
fraxini‡ Gn.
1852. Gn., Spec. Gen., Noct., III, 83, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., IV, 4, pr. syn.
var **phrynia** Hy. Edw.
1880. Hy. Edw., Bull. Bkln. Ent. Soc., III, 54, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 48, pr. syn.
var **bianca** Hy. Edw.
1880. Hy. Edw., Bull. Bkln. Ent. Soc., III, 54, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 48, pr. syn.

HABITAT.—Nova Scotia to New York; Middle States July to October; Oregon; Colorado.

Types of the varieties are in the Hill and Edwards collections.

C. elda Behrens.

1887. Behrens, Can. Ent., XIX, 199, *Catocala.*

HABITAT.—Oregon.

The type is in Dr. Behrens's collection, and a duplicate is in the American Museum of Natural History. The locality, Oregon, for *relicta* is perhaps due to a misnamed specimen of this species.

C. tristis Edw.*

1864. Edw. (W. H.), Proc. Ent. Soc. Phil., II, 511, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., IV, 4, *Catocala.*
1873. Strk., Lep. Rhop. et Het., 17, pl. III, f. 1, *Catocala.*
1874. Hulst, Bull. Bkln. Ent. Soc., VII, 31, 49, *Catocala.*

HABITAT.—Canada, Northern, Eastern, Middle, and Central States, August.

C. epione Dru.*

1773 Drury, Illustr., 1, 46, pl. 23, f. 2, *Noctua.*
1779. Cram., Pap. Ex., II, 9, pl. 102, f. E. F., *Noctua.*
1781. Fabr., Spec. Ins., II, 222, *Noctua.*
1787. Fabr., Mant. Ins., II, 151, *Noctua.*
1788. Gmel., ed. Linn. Syst. Nat., V, 2538, *Noctua.*
1794. Fabr., Ent. Syst., III, 2, 58, *Noctua.*
1811. Oliv., Enc. Meth., 288, pl. LXXXV, f, 6, *Noctua.*
1816. Hbn., Verzeichniss, 276, *Mormonia.*
1840. Westw., ed. Dru. Illustr., I, 44, pl. XXIII, f. 2, *Catocala.*
1852. Gn., Spec. Gen., Noct., III, 93, *Catocala.*
1857. Wlk., C. B. Mus., Het., XIII, 1200, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., IV, 2, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 31, 49, *Catocala.*

HABITAT.—Canada, Northern, Eastern, Middle, and Central States, July.

§ CATABAPTA Hulst.

1884. Hulst, Bull. Bkln. Ent. Soc., VII, 21.

C. antinympha Hbn.*

1816. Hbn., Verzeichniss, 278, *Ephesia.*
1857. Wlk., C. B. Mus., Het., XIII, 1203, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., IV, 13, *Catocala.*
1873. Strk., Lep. Rhop. et Het., 36, pl. V, f. 7, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 32, 49, *Catabapta.*
paranympha ‡ Drury.
1773. Drury, Illustr., I, pl. 23, f. 6, *Phalæna.*
1816. Hbn., Verzeichniss, 278, pr. syn.
affinis Westw.
1840. Westw., ed. Drury, Illustr., I, 44, pl. 23, f. 6, *Catocala.*
1857. Wlk., C. B. Mus., Het., XIII, 1203, pr. syn.
melanympha Gn.
1852. Gn., Spec. Gen., Noct., III, 98, *Catocala.*
1857. Wlk., C. B. Mus., Het., XIII, 1203, pr. syn.

HABITAT.—Canada to Maryland; west to the Mississippi Valley, July and August.

C. serena Edw.*

1864. Edw. (W. H.), Proc. Ent. Soc. Phil., II, 510, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., IV, 13, *Catocala.*
1873. Strk., Lep. Rhop. et. Het., 23, pl. III, f. 11, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 32, 49, *Catabapta.*

HABITAT.—Canada; northern and eastern United States—eastern Siberia. July.

C. badia G. & R.*

1868. G. & R., Proc. Ent. Soc. Phila., VII, 22, pl. IV, f. 1, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., IV, 12, *Catocala.*
1876. Andrews, Can. Ent., VIII, 198, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 32, 49, *Catabapta.*
1887. Hulst, Ento. Amer., III, 27, *Catocala.*
var. **cœlebs** Grt.*
1874. Grt., Trans. Am. Ent. Soc., V, 96, *Catocala.*
1878. Grt., Can. Ent., X, 233, *Catocala.*
1880. Hulst, Bull. Bkln. Ent. Soc., III, 9, pr. var.
1880. Hy. Edw., Bull. Bkln. Ent. Soc., III, 59, an sp. dist.
1883. Grt., Can. Ent. XV, 23, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 50, pr. var.
var. **phœbe** Hy. Edw.
1884. Hy. Edw., Papilio, IV, 125, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 50, pr. var.

HABITAT.—Canada; Northern, Eastern, and Middle States, August. The type of *phœbe* is in the Edwards Collection.

C. muliercula Gn.*

1852. Gn., Spec. Gen., Noct., III, 97, *Catocala.*
1857. Wlk., C. B. Mus., Het., XIII, 1203, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., IV, 12, *Catocala.*
1874. Strk., Lep. Rhop. et. Het., 74, pl. IX, f. 9, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 32, 50, *Catabapta.*
var. **peramans** Hulst.
1884. Hulst., Bull. Bkln. Ent. Soc., VII, 50, pr. var.

HABITAT.—Eastern and central United States.

C. habilis Grt.*

1872. Grt., Trans. Am. Ent. Soc., IV, 11, *Catocala.*
1880. Hulst, Bull. Bkln. Ent. Soc., VIII, 32, 50, *Catabapta.*
1886. Kellicott, Ent. Amer., II, 46, larva.
var. **basalis** Grt.
1876. Grt., Can. Ent., VIII, 230, pr. var.
1880. Hulst, Bull. Bkln. Ent. Soc., VII, 50, pr. syn.
1882. Grt., Papilio, II, 9, pr. var.

HABITAT.—Canada; Eastern, Middle, and Central States, August to October.

C. innubens Gn.*

1852. Gn., Spec. Gen., Noct., III, 98, *Catocala.*
1857. Wlk., C. B. Mus., Het., XIII, 1203, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., IV, 8, *Catocala.*

1884. Hulst, Bull. Bkln. Ent. Soc., VII, 50, *Catabapta.*
1888. French, Can. Ent., XX, 170, larva.
var. **hinda** French.
1881. French, Papilio, I, 111, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 50, pr. syn.
var. **flavidalis** Grt. *
1874. Grt., Trans. Am. Ent. Soc., V, 95, pr. var.
1881. Grt., Papilio, I, 163, pr. var.
1882. Grt., Papilio, II, 9, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VIII, 50, pr. var.
var. **scintillans** G. & R.*
1866. G. & R., Proc. Ent. Soc. Phil., VI, 28, pl. IV, f. 6, *Catocala.*
1872. Grt., Trans Am. Ent. Soc., IV, 8, pr. var.
1882. Grt., Papilio, II, 8, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 50, pr. var.

HABITAT.—Canada, in September and August; Eastern, Middle, and Central United States; Illinois, in June; Wisconsin.

C. paleogama Gn.*

1852. Gn., Spec. Gen., Noct., III, 97, *Catocala.*
1857. Wlk., C. B. Mus., Het., XIII, 1202, *Catocala.*
1865. Grt., Proc. Ent. Soc. Phil., III, 87 et 511, pl. 3, f. 2, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., IV, 10, 11, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 32, 51, *Catabapta.*
annida Fager.
1882. Fager, Can. Ent., XIV, 120, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 51, pr. syn.
var. **phalanga** Grt.*
1865. Grt., Proc. Ent. Soc. Phil., III, 86, pl. III, f. 1, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., IV, 11, pr. var.
1880. Hulst, Bull. Bkln. Ent. Soc., III, 9, aberr. pr.
1882. Grt., Papilio, II, 9, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 51, pr. var.

HABITAT.—Eastern, Middle, and Central States, July and August.

C neogama S. & A.*

1797. S. & A., Ins. Ga., II, 175, pl. 88, *Phalæna.*
1811. Oliv., Enc. Meth., VIII, 290, *Noctua.*
1840. Duncan, in Jardine Nat. Libr., 37, 202, pl. 26, ff. 1–2, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., IV, 9, *Catocala.*
1873. Strk., Lep. Rhop. et Het., 35, pl. 5, ff. 4, 5, *Catocala.*
1881. Grt., Papilio, I, 163, *Catocala.*
1882. Grt., Papilio, II, 8, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 32, 51, *Catabapta.*
var. **communis** Grt.
1872. Grt., Trans. Am. Ent. Soc., IV, 9, *Catocala.*
1875. Grt., Bull. Bkln. Ent. Soc., II, 221, *Catocala.*
1882. Grt., Papilio, II, 8, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 52, pr. syn.
1887. Grt., Can. Ent., XIX, 113, an sp. dist.
neogama ‡ Gn.
1852. Gn., Spec. Gen., Noct., III, 96, *Catocala.*

1857. Wlk., C. B. Mus., Het., XIII, 1202, *Catocala*.
1872. Grt., Trans. Am. Ent. Soc., IV, 9, = *communis*.
1887. Grt., Can. Ent., XIX, 113, = *communis*.
var. **snoviana** Grt.
1876. Grt., List Noctuidæ, 41, *Catocala*.
1880. Hulst, Bull Bkln. Ent. Soc., III, 10, an var. *ilia*.
1881. Grt., Papilio, 1, 8, an sp. dist. *ilia*.
1882. Grt., Papilio, II, 7, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 51, pr. var.?

HABITAT.—United States east of the Rocky Mountains; Kansas; Arizona. Eastern range in July and August.

The type of *snoviana* is in the Edwards collection.

C. subnata Grt.*

1865. Grt., Proc. Ent. Soc. Phil., III, 326, pl. IV, f. 5, *Catocala*.
1872. Grt., Trans. Am. Ent. Soc., IV, 9, *Catocala*.
1873. Strk., Lep. Rhop. et Het., 34, 106, pl. V, f. 3, *Catocala*.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 32, 51, *Catabapta*.

HABITAT.—Eastern and central United States. New York in August.

C. piatrix Grt.*

1865. Grt., Proc. Ent. Soc. Phil., III, 88, 532, pl. III, f. 3, *Catocala*.
1872. Grt., Trans. Am. Ent. Soc., IV, 10, *Catocala*.
1874. Strk., Lep. Rhop. et. Het., 74, pl. IX, f. 8, *Catocala*.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 32, 52, *Catabapta*.
var. **dionyza** Hy. Edw.
1884. Hy. Edw., Papilio, IV, 124, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 52 pr. var.

HABITAT.—United States east of the Rocky Mountains; Arizona; Texas in July. Northern range August and September.

The type of *dionyza* is with Mr. Neumœgen.

C. nebulosa Edw.*

1864. Edw. (W. H.), Proc. Ent. Soc. Phil., II, 510, *Catocala*.
1872. Grt., Trans. Am. Ent. Soc., IV, 11, *Catocala*.
1874. Strk., Lep. Rhop. et Het., 75, pl. IX, f. 11, *Catocala*.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 32, 52, *Catabapta*.
ponderosa G. & R.
1866. G. & R., Proc. Ent. Soc. Phil., VI, 23, pl. IV, f. 2, *Catocala*.
1874. Strk., Lep. Rhop. et Het., 75, pr. syn.

HABITAT.—Middle and Central States.

C. judith Strk.*

1874. Strk., Lep. Rhop. et Het., 95, pl. XI, f. 5, *Catocala*.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 52, *Catocala*.
levettei Grt.
1874. Grt., Trans. Am. Ent. Soc., V, 95, *Catocala*.
1875. Strk., Lep. Rhop. et Het., 105, pr. syn.
1880. Hulst, Bull. Bkln. Ent. Soc., III, 8, 12, pr. syn.
1881. Grt., Papilio, I, 160, *Catocala*.

1881. Hulst, Papilio, I, 218, pr. syn.
var. **miranda** Hy. Edw.
1881. Hy. Edw., Papilio, I, 118, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 52, pr. var.

HABITAT.—Eastern, Middle and Central States.

The type of *miranda* is in the Edwards collection.

C. robinsonii Grt.*

1872. Grt., Trans. Am. Ent. Soc., IV, 20, *Catocala.*
1874. Strk., Lep. Rhop. et Het., 71, pl. IX, f. 1, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 32, 52, *Catabapta.*
var. **curvata** French.
1881. French, Papilio, 1, 218, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 52, pr. syn.

HABITAT.—Eastern, Middle and Central States; New York; Illinois; Mississippi.

C. dejecta Strk.

1880. Strk., Bull. Bkln. Ent. Soc., II, 97, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 32, 52, *Catabapta.*

HABITAT.—Eastern, Middle and Central States.

C. retecta Grt.*

1872. Grt., Trans. Am. Ent. Soc., IV, 4, *Catocala.*
1874. Strk., Lep. Rhop. et Het., 71, pl. IX, f. 2, *Catocala.*
1881. Kellicott, Papilio, I, 141, larva sub nom. *flebitis.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 32, 53, *Catabapta.*
1886. Kellicott, Ent. Amer., II, 46, larva.
var. **flebilis** Grt.
1872. Grt., Trans. Am. Ent. Soc., IV, 4, *Catocala.*
1874. Strk., Lep. Rhop. et Het., 71, pl. IX, f. 3 & 4, *Catocala.*
1876. Grt., Can. Ent., VIII, 229, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 53, pr. syn.
1891. Grt., Can. Ent., XXIII, 281, *Catocala.*

HABITAT.—Canada; Northern, Eastern, Middle, and Central States. August and September.

C. luctuosa Hulst.

1884. Hulst, Bull. Bkln. Ent. Soc., VII, 32, 53, *Catabapta.*

HABITAT.—Middle and Western States.

C. vidua S. & A.*

1797. S. & A., Ins. Ga., II, 181, pl. 91, *Phalæna.*
1811. Oliv., Enc. Meth., VIII, 288, *Noctua.*
1872. Grt., Trans. Am. Ent. Soc., IV, 3, *Catocala.*
1884. Hulst, Bull, Bkln. Ent. Soc. VII, 53, *Catabapta.*
desperata Gn.
1852. Gn., Spec. Gen., Noct. III, 95, *Catocala.*
1857. Wlk., C. B. Mus., Het., XIII, 1201, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., IV, 3, ? pr. syn.
1873. Strk., Lep. Rhop. et Het., 33, pl. V, f. 2, *Catocala.*
1880. Hulst, Bull. Bkln. Ent. Soc., III, 12, pr. syn.

1882. Grt., New List, 65, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 53, pr. syn.
1888. French, Can. Ent., XX, 28, *Catocala.*

HABITAT.—Canada to Florida; Central States. August and September.

C. maestosa Hulst.*

1884. Hulst, Bull. Bkln. Ent. Soc., VII, 32, 53, *Catobapta.*
vidua et viduata ‡ Gn.
1852. Gn., Spec. Gen., Noct., III, 94 et 400, *Catocala.*
1872. Grt., Trans. Am. Ent. Soc., IV, 3, *Catocala.*
1873. Strk., Lep. Rhop. et Het., 17, pl. III, 2, *Catocala.*
1880. Hulst, Bull. Bkln. Ent. Soc., III, 12, *Catocala.*
1882. Grt., New List, 65, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 53, pr. syn.
guencei Grt.
1887. Grt., Can. Ent. XIX, 115, *Catocala.*

HABITAT.—Pennsylvania, southward; Central States.

C. lacrymosa Gn.*

1852. Gn., Spec. Gen., Noct., III, 93, *Catocala.*
1857. Wlk., C. B. Mus., Het., XIII, 1199, ?=*vidua.*
1872. Grt., Trans. Am. Ent. Soc., IV, 9, *Catocala.*
1873. Strk., Lep. Rhop. et Het., 18, pl. III, f. 3, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 32, 54, *Catabapta.*
var. **ulalume** Strk.
1877. Strk., Lep. Rhop. et Het., 132, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 54, pr. syn.
var. **evelina** French.
1881. French, Papilio, I, 110, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 54, pr. var.
emilia Hy. Edw.
1881. Hy. Edw., Papilio, I, 117, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 54,=*evelina.*
var. **zelica** French.
1881. French, Papilio, I, 111, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 54, pr. var.
var. **paulina** Hy. Edw.
1880. Hy. Edw., Bull. Bkln. Ent. Soc., III, 54, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 54, pr. var.

HABITAT.—New York to Texas; Ohio; Illinois; Southern States.

C. sappho Strk.*

1874. Strk., Lep. Rhop. et Het., 95, pl. XI, f. 4, *Catocala.*
1880. Hulst, Bull. Bkln. Ent. Soc., III, 13, *Catocala.*
1881. French, Papilio, I, 57, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 32, 54, *Catabapta.*
1886. French, Can. Ent., XVIII, 162, *Catocala.*

HABITAT.—Illinois; Texas; Central and Southern States.

C. agrippina Strk.*

1874. Strk., Lep. Rhop. et Het., 95, pl. XI, f. 1, 3, *Catocala.*
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 32, 55, *Catabapta.*

var. **subviridis** Harv.
1877. Harv., Can. Ent., IX, 193, *Catocala*.
1880. Hulst, Bull. Bkln. Ent. Soc., III, 13, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 55, pr. var.

HABITAT.—Middle and Southern States to Texas; Texas in July.

C. insolabilis Gn.*

1852. Gn., Spec. Gen., Noct., III, 91, *Catocala*.
1857. Wlk., C. B. Mus., Het., XIII, 1200, *Catocala*.
1872. Grt., Trans. Am. Ent. Soc., IV, 3, *Catocala*.
1873. Strk., Lep. Rhop. et Het., 33, pl. V, f. 1, *Catocala*.
1875. Grt., Bull. Buff. Soc. Nat, Sci., III, 187, pl. V, f. 3, *Catocala*.
1880. Hulst, Bull. Bkln. Ent. Soc., III, 13, *Catocala*.
1884. Angus, Papilio, IV, 35, *Catocala*.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 32, 55, *Catabapta*.

HABITAT.—Canada in June; Middle, Central, and Southern States, August and September.

C. angusi Grt.*

1876. Grt., Can. Ent., VIII, 229, *Catocala*.
1877. Grt., Bull. Buff. Soc. Nat. Sci., III, 188, pl. 5, f. 1 and 2, *Catocala*.
1880. Hulst, Bull. Bkln. Ent. Soc., III, 13, an var. *insolabilis*.
1884. Angus, Papilio, IV, 35, an sp. dist.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 32, 55, an sp. dist.
var. **lucetta** Hy. Edw.
1882. Hy. Edw., in French, Cat. Ills., 4, pr. var.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 55, pr. syn.

HABITAT.—Middle, Central, and Southern States.

The type of *angusi* is in the American Museum of Natural History, from the Angus Collection.

C. obscura Strk.*

1873. Strk., Lep. Rhop. et Het., 19, pl. III, f. 4, *Catocala*.
1884. Angus, Papilio, IV, 37, *Catocala*.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 32, 55, *Catabapta*.
1886. Kellicott, Ent. Amer., II, 16, larva.
simulatilis Grt.
1874. Grt., Trans. Am. Ent. Soc., V, 95, *Catocala*.
1875. Strk., Lep. Rhop. et Het., 106, pr. syn.
1876. Grt., Can. Ent., VIII, 229, an sp. dist.
1882. Grt., Papilio, II, 8, an var. pr.
1884. Angus, Papilio, IV, 37, pr. syn.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 55, pr. syn.
var. **residua** Grt.
1874. Grt., Proc. Bost. Soc. N. H., XVI, 242, *Catocala*.
1875. Strk., Lep. Rhop. et Het., 106, an var. *insolabilis*.
1877. Grt., Bull. Buff. Soc. Nat. Sci., III, pl. 5, f. 4, *Catocala*.
1877. Harv., Can. Ent., IX, 194, *Catocala*.
1880. Hulst, Bull. Bkln. Ent. Soc., III, 13, an var. *insolabilis*.
1884. Angus, Papilio, IV, 35, an sp. dist.
1884. Hulst, Bull. Bkln. Ent. Soc., VII, 55, pr. var.

HABITAT.—Canada to Middle and Central States in August; Colorado.

The type of *residua* is in the American Museum of Natural History from the Angus Collection.

Catocala adultera Hinze, recorded by Motschulsky in his Etudes, 1857, p. 47, as from California, has been omitted for want of proper authentication. It is likely that one of the common Pacific slope species resembling *adultera* somewhat, was mistaken for it.

Genus **OPHIDERES** Bdv.

1834. Bdv., Fn. Ent. Madag., Lep., 99.

O. materna Linn.*

1767. Linn., Syst. Nat., ed. XII, 2, p. 840, *Noctua.*
1773. Drury, Illustr., II, 24, pl. 13, f. 4, *Noctua.*
1779. Cram., Pap. Exot., II, 118, pl. 174, f. *B*, *Phalæna.*
1781. Fabr., Spec. Ins., II, 212, *Noctua.*
1782. Cram., Pap. Exot., III, 137, pl. 267, f. *E*, *Phalæna.*
1787. Fabr., Mant. Ins., II, 137, *Noctua.*
1788. Gmel., ed. Linn., Syst. Nat., V, p. 2533, *Noctua.*
1793. Fabr., Ent. Syst., III, 2, 16, *Noctua.*
1811. Oliv., Enc. Meth., VIII, 259, *Noctua.*
1816. Hbn., Verzeichniss, 264, *Rhytia.*
1834. Bdv., Fn. Ent. Madag., 100, *Ophideres.*
1841. Duncan, in Jardine, Nat. Libr., XXXII, 201, pl. 35, f. 2, *Triphæna.*
1852. Gn., Spec. Gen., Noct., III, 113, *Ophideres.*
1856. Lucas, in Sagra's Cuba, 307, *Ophideres.*
1857. Wlk., C. B. Mus., Het., XIII, 1222, *Ophideres.*
1868. H. Sch., Corr. Blatt, 1868, Cuba, 23, *Ophideres.*
1875. Grt., Proc. Bost. Soc. N. H., XVIII, 416, *Ophideres.*
1885. Gundlach, Cont. Ent. Cub., 340, *Ophideres.*
hybrida Fabr.
1775. Fabr., Syst. Ent., 593, *Noctua.*
1781. Fabr., Spec. Ins., II, 212, pr. syn.
calaminea Cram.
1779. Cram., Pap. Exot., II, 95, pl. 74, f. *A*, *Phalæna.*
1781. Fabr., Spec. Ins., II, 212, pr. syn.

HABITAT.—Florida, southward.

A tropical insect in habitus and form. The literature as a South and Central American insect is not given.

Genus **STRENOLOMA** Grt.

1880. Grt., No. Amer. Ent., I, 97.

S. lunilinea Grt.*

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 127, *Spiloloma.*
1880. Grt., No. Amer. Ent., I, 97, *Strenoloma.*
1882. Grt., Ill. Essay, 71, pl. IV, f. 45, *Strenoloma.*

HABITAT.—Pennsylvania; Virginia; Kansas; Illinois; Mississippi; District of Columbia in August.

The type is in the British Museum.

Genus **TOXOCAMPA** Gn.

1841. Gn., Ann. Soc. Ent. Fr., x, 75.

T. victoria Grt.,*

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 163, *Toxocampa.*
1880. Grt., Bull. Bkln. Ent. Soc., III, 48, *Toxocampa.*

HABITAT.—Victoria; New York; Colorado in August; New Mexico. The type is in the British Museum.

Genus **HOMOPHOBERIA** Morr.

1875. Morr., Proc. Bost. Soc. N. H., XVIII, 125.

H. cristata Morr.

1875. Morr., Proc. Bost. Soc. N. H., XVIII, 125, *Homophoberia.*

HABITAT.—Hoboken, New Jersey.

The species was described from the Sachs collection, and seems to be one of those unfortunate Hoboken forms that have not turned up again since their original description. I have no idea where the type is at present.

Genus **PHOBERIA** Hbn.

1816. Hbn., Verzeichniss, 267.

P. atomaris Hbn.*

1818. Hbn., Zuträge, I, 16, ff. 75, 76, *Phoberia.*
1816. Hbn., Verzeichniss, 268, *Phoberia.*
1858. Wlk., C. B. Mus., Het., XIV, 1421, ? *Ophiusa.*
1880. Grt., Can. Ent., XII, 86, *Poaphila.*
orthosioides Gn.
1852. Gn., Spec. Gen., Noct., III, 296, pl. 23, f. 1, *Lyssia.*
1858. Wlk., C. B. Mus., Het., XIV, 1421, pr. syn.
1880. Grt., Can. Ent., XII, 86, pr. syn.
forrigens Wlk.
1858. Wlk., C. B. Mus., Het., XIV, 1474, *Poaphila.*
ingenua Wlk.
1858. Wlk., C. B. Mus., Het., XIV, 1472, *Poaphila.*

HABITAT.—Eastern, Middle, Central, and Southern States; Massachusetts and New York in April and May; Texas in March.

Types of the Guenée and Walker species are in the British Museum, and are all more or less distinctly marked specimens of our common species.

P. indiscreta Hy. Edw.

1886. Hy. Edw., Ent. Amer., II, 170, *Phoberia.*

HABITAT.—Kern County, California.

The type is in the Edwards collection. There may be some doubt of the correctness of the generic reference.

Genus **CELIPTERA** Gn.

1852. Gn., Spec. Gen., Noct., III, 308.

C. frustulum Gn.*

1852. Gn., Spec. Gen., Noct., III, 308, *Celiptera.*
1858. Wlk., C. B. Mus., Het., XIV, 1187, *Celiptera.*

discissa Wlk.
1865. Wlk., C. B. Mus., Het., XXXIII, 1009, *Remigia*.
1868. G. & R., Trans. Am. Ent. Soc., II, 88, = *L. elongatus*.
elongatus Grt.
1865. Grt., Proc. Ent. Soc. Phil., III, 85, pl. 2, f. 6, *Litomitus*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 39, pr. syn.

HABITAT.—Canada; Eastern, Middle, Central, and Southern States; District of Columbia in August; Delaware in July.

Guenée's type is with M. Oberthür. The type of *discissa* is in the British Museum. Mr. Grote's type I have not seen.

C. bucetum Grt.

1883. Grt., Trans. Kans. Ac. Sci., VIII, 50, *Celiptera*.

HABITAT.—New Mexico.

The type is with Prof. Snow.

Genus **FAGITANA** Wlk.

1865. Wlk., C. B. Mus., Het., XXXII, 645.

F. littera Gn.*

1852. Gn., Spec. Gen., Noct., I, 71, *Leucania*.
1856. Wlk., C. B. Mus., Het., IX, 77, *Mythimna*.
1882. Grt., Ill., Essay, 41, *Pseudolimacodes*.
lucidata Wlk.
1865. Wlk., C. B. Mus., Het., XXXII, 645, *Fagitana*.
niveicostatus Grt.
1874. Grt., Proc. Ac. Nat. Sci. Phil., 1874, 212, *Pseudolimacodes*.
1875. Grt., Stett. Ent. Zeit., XXXVI, 199, *Pseudolimacodes*.
1882. Grt., Ill. Essay, 41, pr. syn.

HABITAT.—New York; Massachusetts in July; Florida; Illinois.

The Guenée and Walker types are in the British Museum. Mr. Grote's type I have not seen; but have seen a number of specimens named by him. Walker's species was described without locality and in such a way as to be not readily recognizable. As *Fagitana* has only the one species, it must be used in preference to Mr. Grote's generic term, under the rules. On the location of the genus I express no opinion. Guenée considers it Leucaniid. Mr. Grote places it in its present position on characters that seem valid to him.

Genus **PHURYS** Gn.

1852. Gn., Spec. Gen., Noct., III, 303.

The genera in this series need revision. The differences between *Celiptera*, *Phurys*, and some species of *Poaphila* are difficult to make out; but I have in most cases left matters as they were, since any changes here could be only tentative and liable to further change on critical study. There are, also, a number of Verzeichniss genera that have not been applied, and which will probably have to be used to replace one or more of the terms adopted here. They are all indicated in the synonymy. The specific unions are all correct I believe.

P. vinculum Gn.*

1852. Gn., Spec. Gen., Noct., III, 304, *Phurys.*
1858. Wlk., C. B. Mus., Het., XIV, 1479, *Phurys.*

HABITAT.—Georgia; Florida; Southern States.

The type is with M. Oberthür.

P. herbarum Gn.

1852. Gn., Spec. Gen., Noct., III, 303, *Poaphila.*
1858. Wlk., C. B. Mus., Het., XIV, 1471, *Poaphila.*
bifasciata Bates.
1886. Bates, Can. Ent., XVIII, 94, *Celiptera.*
1888. Bates, Can. Ent., XX, 100, = *vinculum.*

HABITAT.—Southern States.

The type is with M. Oberthür. In the British Museum are specimens of both the above species, apparently named by Guenée and agreeing with his description. They are closely allied; but in *vinculum* the orbicular is present and the subterminal dotted line is distinct. The *vinculum* of the Grote collection and of American collections generally is the *herbarum* of Guenée according to these specimens, and I have accordingly cited *bifasciata* Bates to this species. Mr. Bates referred his species to *vinculum* on my authority, and what I knew as *vinculum* was what Mr. Grote had so named.

P. ovalis Grt.

1883. Grt., Papilio, III, 75, *Phurys.*

HABITAT.—Arizona.

The type is with Mr. Neumœgen.

P. lima Gn.*

1852. Gn., Spec. Gen., Noct., III, 305, *Phurys.*
1858. Wlk., C. B. Mus., Het., XIV, 1479, *Phurys.*
obversa Wlk.
1858. Wlk., C. B. Mus., Het., XIV, 1473, *Poaphila.*
dissocians Wlk.
1858. Wlk., C. B. Mus., Het., XIV, 1477, *Poaphila.*

HABITAT.—Southern States; New York.

Guenées type is with M. Oberthür. The specimens in the Grote collection agree with those so named in the British Museum, apparently by Guenée. The Walker types are both in the Museum and are like the Grote specimens of *lima*: *dissocians* was described without locality.

P. bistrigata Hbn.

1818. Hbn., Zutræge, I, 21, f. 111, 112, *Ptichodes.*
1816. Hbn., Verzeichniss, 338, *Ortholitha.*
1852. Gn., Spec. Gen., Noct., III, 303, *Poaphila.*
1858. Wlk., C. B. Mus., Het., XIV, 1471, *Poaphila.*
1880. Grt., Can. Ent., XII, 87, *Poaphila.*
1882. Grt., New List, 41, *Phurys.*

HABITAT.—Georgia.

I am not aware that this species has been positively identified in American collections. I have not seen it myself.

P. perspicua Wlk.*

1858. Wlk., C. B. Mus., Het., XIV, 1477, *Poaphila.*
glans Grt.
1875. Grt., Proc. Bost. Soc. N. H., XVIII, 416, *Phurys.*

HABITAT.—Florida.

The types are in the British Museum, and refer to one species only. *Perspicua* was described from locality unknown; but the specimen is probably from Doubleday's Florida material.

Genus **POAPHILA** Gn.

1852. Gn., Spec. Gen., Noct., III, 299.

P. quadrifilaris Hbn.*

1823. Hbn., Zutræge, III, 37, f. 569, 570, *Agnomonia.*
1852. Gn., Spec. Gen., Noct., III, 300, *Poaphila.*
1858. Wlk., C. B. Mus., Het., XIV, 1469, *Poaphila.*
1880. Grt., Can. Ent., XII, 118, *Poaphila.*

HABITAT.—New York in May and June, southward to Florida; Massachusetts in June.

P. deleta Gn.*

1852. Gn., Spec. Gen., Noct., III, 300, *Poaphila.*
1858. Wlk., C. B. Mus., Het., XIV, 1469, *Poaphila.*
obsoleta Grt.
1876. Grt., Check List, Noct., 42, *Poaphila 4-filaris var.*
1882. Grt., New List, 41, sp. dist.

HABITAT.—Southern States.

Types of Guenée's species are in both the London and Paris Museums, and are like the type of *obsoleta* in the British Museum. Mr. Grote based his name *obsoleta* on what he identified as Guenée's var. *a*, of *P. quadrifilaris*, and misidentified *deleta*. The *deleta* of the Grote collection is the *contempta* Bdv., as identified by Guenée. It is probable that this error is repeated in all the American collections deriving their determinations through Mr. Grote.

P. contempta Bdv.

1852. Bdv., in Gn., Spec. Gen., Noct., III, 302, *Poaphila.*
1858. Wlk., C. B. Mus., Het., XIV, 1470, *Poaphila.*

HABITAT.—Georgia; Florida; Southern States.

The type is with Mr. Oberthür. As already stated, this is the *deleta* of the Grote collection.

P. sylvarum Gn.*

1852. Gn., Spec. Gen., Noct., III, 300, pl. XXIII, f. 2, *Poaphila.*
1858. Wlk., C. B. Mus., Het., XIV, 1469, *Poaphila.*

HABITAT.—Southern States.

The types were from the Boisduval collection and are probably with

M. Oberthür. A specimen, apparently determined by Guenée, is in the British Museum, and this agrees with the specimens so named in the Grote collection.

P. erasa Gn.

1852. Gn., Spec. Gen., Noct., III, 301, *Poaphila*.
1858. Wlk., C. B. Mus., Het., XIV, 1470, *Poaphila*.

HABITAT.—Southern States.

Typical specimens, named by Guenée, are in the British Museum and in the Jardin des Plantes, and with these the *erasa* of the Grote collection agrees; but the *herbicola* of the same collection is also *erasa*, and not the *herbicola* Bdv.

P. herbicola Bdv.*

1852. Gn., Spec. Gen., Noct., III, 301, *Poaphila*.
1857. Wlk., C. B. Mus., Het., XIV, 1417, *Poaphila*.

HABITAT.—Southern States.

The type is probably in the Oberthür collection. In the Jardin des Plantes at Paris is a specimen named *herbicola* by Guenée, which is very like *erasa* in habitus and maculation and seems to differ only in the much paler ground color. It is much paler than the *herbicola* of the Grote collection; but it is not at all unlikely that intermediate specimens will be found and that *herbicola* is a washed-out *erasa*.

P. flavistriaria Hbn.

1823. Hbn., Zutræge, III, f. 555, 556, *Crochiphora*.
1852. Gn., Spec. Gen., Noct., III, 303, *Poaphila*.
1858. Wlk., C. B. Mus., Het., XIV, 1470, *Poaphila*.
1880. Grt., Can. Ent., XII, 118, *Poaphila*.

HABITAT.—Southern States.

P. pacalis Wlk.

1858. Wlk., C. B. Mus., Het., XIV, 1475, *Poaphila*.
irrorata Grt.
1878. Grt., Bull. Geol. Surv., IV, 185, *Poaphila*.

HABITAT.—Florida.

The types are both in the British Museum, and are undoubtedly the same, specifically.

P. placata Grt.

1878. Grt., Bull. Geol. Surv., IV, 184, *Poaphila*.

HABITAT.—Georgia.

I have not seen the type, nor do I know where it is.

P. perplexa Bdv.

1852. Bdv., in Gn., Spec. Gen., Noct., III, 302, *Poaphila*.
1858. Wlk., C. B. Mus., Het., XIV, 1470, *Poaphila*.

HABITAT.—Georgia.

A type specimen is in the Paris Museum. It is a *Phurys*, allied to *herbarum*, with the t. a. line and subterminal spots wanting. I am not certain that I have seen just this form in American collections.

P. revoluta Wlk.

1858. Wlk., C. B. Mus., Het., XIV, 1472, 1835, *Poaphila.*

HABITAT.—United States.

The type is not in the British Museum, or at all events I failed to find it. The label is there; but no specimen. It is probably at Oxford, in the Saunders collection.

P. turbata Wlk.

1858. Wlk., C. B. Mus., Het., XIV, 1834, *Poaphila.*

HABITAT.—East Florida.

The type in the British Museum is a poor, faded specimen of a *Perigea.* There is a whitish powdered reniform and a punctiform white t. p. line. It looks familiar enough, yet I felt afraid to identify it with any of the species in the Museum Collection, and am not positive that it can ever be certainly identified.

Genus **PARALLELIA** Hbn.

1816. Hbn., Verzeichniss, 269.

P. bistriaris Hbn.*

1818. Hbn., Zutræge, 1, 15, f. 63, 64, *Parallelia.*
1816. Hbn., Verzeichniss, 269, *Parallelia.*
1852. Gn., Spec. Gen., Noct., III, 268, *Ophiusa.*
1858, Wlk., C. B. Mus., Het., XIV, 1420, *Ophiusa.*
1870. Saund., Can. Ent., II, 130, larva.
1880. Grt., Can. Ent., XII, 86, *Parallelia.*
1883. Hy. Edw., Papilio, III, 136, larva.
amplissima Wlk.
1858. Wlk., C. B. Mus., Het., XIV, 1473, *Poaphila.*
1868. G. & R., Trans. Am. Ent. Soc., II, 79, pr. syn.

HABITAT.—Nova Scotia to Florida, west to Colorado; Canada, June and July; New York, June to August; New Jersey, May and June; District of Columbia in May; Kansas in May.

The Walker type is in the British Museum.

Genus **AGNOMONIA** Hbn.

1823. Hbn., Zutraege, III, 10.

A. anilis Dru.*

1797. Drury. Illustr., II, 21, pl. 12, f. 3, *Noctua.*
1816. Hbn., Verzeichniss, 252, *Argyrostrotis.*
1852. Gn., Spec. Gen., Noct., III, 273, *Agnomonia.*
1858. Wlk., C. B. Mus., Het., XIV, 1437, *Agnomonia.*
sesquistriaris Hbn.
1823. Hbn., Zutræge, III, 10, f. 419, 420, *Agnomonia.*
1852. Gn., Spec. Gen., Noct., III, 273, pr. syn.

HABITAT.—Middle and Southern states; Texas, April to June; Missouri in August.

Genus **PALINDIA** Gn.

1852. Gn., Spec. Gen., Noct., II, 271.

P. dominicata Gn.

1852. Gn., Spec. Gen., Noct., II, 276, pl. XI, f. 1, *Palindia.*
1857. Wlk., C. B. Mus., Het., XII, 846 *Palindia.*
1879. Grt., No. Amer. Ent., I, 13, *Palindia.*

HABITAT.—Texas; South America.

I do not know where the type is at present.

Genus **SIAVANA** Wlk.

1857. Wlk., C. B. Mus., Het., XIII, 1009,

S. repanda Wlk.*

1858. Wlk., C. B. Mus., Het., XIII, 1009, *Siavana.*
auripennis Grt.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 126, *Harveya.*

HABITAT.—Southern States; Kentucky; Florida.

The Walker type is in the British Museum. The Grote type I have not seen, the specimen in the British Museum not being such. Mr. Grote for some reason never listed this Walker species, though Florida is given as the locality and the description is not entirely inapplicable.

Genus **PANAPODA** Gn.

1852. Gn., Spec. Gen., Noct., III, 324.

P. rufimargo Hbn. *

1818. Hbn., Zuträge, I, 13, ff. 45, 46, *Phoberia.*
1852. Gn., Spec. Gen., Noct., III, 324, *Panapoda.*
1858. Wlk., C. B. Mus., Het., XIV, 1517, *Panapoda.*
1878. Grt., Bull. Geol. Surv., IV, 184, *Panapoda.*
1880. Grt., Can. Ent., XII, 85, *Panapoda.*
1892. Beut., Bull. Am. Mus. N. H., IV. 69, larva.
rubricosta Gn.
1852. Gn., Spec. Gen., Noct., III, 324, *Panapoda.*
1858. Wlk., C. B. Mus., Het., XIV, 1517, *Panapoda.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 44, pr. syn.
1876. Grt., Check List Noct., 42, pr. syn.
1878. Grt., Bull. Geol. Surv., IV, 184, pr. syn.
1880. Grt., Can. Ent., XII, 85, pr. syn.
cressonii Grt.
1863. Grt., Proc. Ent. Soc. Phil., I, 346, pl. III, f. 4, *Panapoda.*
1865. Wlk., C. B. Mus., Het., XXXIII, 1021, ? pr. syn.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 44, pr. syn.
4878. Grt., Bull. Geol. Surv., IV, 184, pr. syn.
1880. Grt., Can. Ent., XII, 85, pr. syn.
var. **carneicosta** Gn.*
1852. Gn., Spec. Gen., Noct., III, 325, *Panapoda.*
1858. Wlk., C. B. Mus., Het., XIV, 1517, *Panapoda.*
1891. Smith, List Lepid., 61, pr. var.
1892. Beut., Bull. Am. Mus. N. H., IV, 68, larva.
scissa Wlk.
1865. Wlk., C. B. Mus., Het., XXXIII, 987, *Poaphila.*

1868. G. & R., Trans. Am. Ent. Soc., II, 88, *carneicosta.*
combinata Wlk.
1858. Wlk., C. B. Mus., Het., XIV, 1436, *Ophiusa.*
var. **roseicosta** Gn.
1852. Gn., Spec. Gen., Noct., III, 325, *Panapoda.*
1858. Wlk., C. B. Mus., Het., XIV, 1517, *Panapoda.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 44, pr. syn.
1878. Grt., Bull. Geol. Surv., IV, 184, pr. syn.
1880. Grt., Can. Ent., XII, 85, pr. syn.
1882. Grt., New List, 41, pr. var.
1889. Soule & Eliot, Psyche, V, 259, larva.

HABITAT.—Middle, Southern, and Central States, June to August; Texas, in March, April, and August.

The type of *rubricosta* is probably with M. Oberthür. I have not seen it. The type of *cressoni* I have not seen, nor do I know of its present whereabouts. The type of *carneicosta* is in the Jardin des Plantes, where I have seen it. It is the form in which the ordinary spots are black and distinct. The Walker types are in the British Museum and are both referable here. *Roseicosta* Gn., was described after a drawing by Abbot, and Guenée himself suspected its identity with *rubricosta.* I have not seen this figure, but do not doubt that the species belongs here.

Genus PLEONECTYPTERA Grt.

1872. Grt., Trans. Am. Ent. Soc., IV, 23.

P. pyralis Hbn.*

1818. Hbn., Zuträge, I, 23, f. 127, 128, *Hemeroplanis.*
1872. Grt., Trans. Am. Ent. Soc., IV, 23, *Pleonectyptera.*
1880. Grt., Can. Ent., XII, 87, *Pleonectyptera.*
irrecta Wlk.
1865. Wlk., C. B. Mus., Het., XXXIV, 993, *Poaphila.*
floccalis Zell.
1872. Zell., Verh. k. k. zoöl. bot. Ges., XXII, 476, t. I, f. 10, *Coptocnemia.*
1891. Smith, List Lepidoptera, 61, pr. syn.

HABITAT.—Middle, Southern and Central States; Texas.

The type of *irrecta* is in the British Museum. *Pyralis* Hbn., is the form with a rusty maculation on a bright yellow ground. The type of *floccalis* is in the Museum at Cambridge, where I have compared it with normal *pyralis.* Mr. Grote's genus has priority by two or three months, but the characterization fails to call attention to the interesting leg structure figured by Zeller.

P. geometralis Grt.*

1872. Grt., Trans. Am. Ent. Soc., IV, 24, *Pleonectyptera.*

HABITAT.—Alabama; Southern States; Florida in March.

The type is in the American Entomological Society's collection. The species is exactly like *pyralis* in maculation, but the bright yellow is replaced by a uniform rusty brown. But even in the type a yellowish suffusion is perceptible, and I am convinced that we have to do with forms of one species only.

P. habitalis Wlk.

1859. Wlk., C. B. Mus., Het., XVI, 39, *Hypena.*
phalænalis Grt.
1872. Grt., Trans. Am. Ent. Soc., IV, 24, *Pleonectyptera.*

HABITAT.—Alabama; Southern States.

Walker's type is in the British Museum; that of the Grote species is in the collection of the American Entomological Society. I have a specimen which has been compared with both types and agrees well with each of them. For a change, Mr. Grote's type is much the poorest and least recognizable.

P. historialis Grt.

1882. Grt., Can. Ent., XIV, 188, *Pleonectyptera.*

HABITAT.—Arizona.

The type is in the Neumœgen collection.

P. immaculalis Harv.*

1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 13, *Pleonectyptera.*

HABITAT.—Texas, in March, April, and July.

The type is in the British Museum.

P. obliqualis Hy. Edw.*

1886. Hy. Edw., Ent. Amer., II, 171, *Pleonectyptera.*

HABITAT.—Texas.

The type is in the Edwards collection.

P. incusalis Grt.

1881. Grt., Can. Ent., XIII, 133, *Bomolocha.*

HABITAT.—Colorado; Arizona.

Types are in the British Museum and in the Edwards collection. I have seen both, and have a carefully compared specimen. I can not understand the reference to *Bomolocha*, with which the species has nothing in common.

P. subflavidalis Grt.

1881. Grt., Papilio, I, 166, *Megachyta.*

HABITAT.—Arizona.

The type is with Mr. Neumœgen and is undoubtedly a *Pleonectyptera.*

Genus **REMIGIA** Gn.

1852. Gn., Spec. Gen., Noct., III, 313.

R. latipes Gn.*

1852. Gn., Spec. Gen., Noct., III, 314, *Remigia.*
1858. Wlk., C. B. Mus., Het., XIV, 1494, *Remigia.*
1869. Bethune, Can. Ent., I, 88, *Remigia.*
1869. H. Sch., Corr. Blatt, 1869, Cuba, 28, *Remigia.*
1885. Gundlach, Cont. Ent. Cub., 354, *Remigia.*
repanda‡ Bdv.
1834. Bdv., Fn. Ent. Madag., 107, 12, pl. XIII, f. 3, *Ophiusa.*

1852. Gn. Spec. Gen., Noct., III, 314, pr. syn.
punctularis ‡ Bdv.
1840. Bdv., Ind. Meth., 107, *Ophiusa.*
1852. Gn., Spec. Gen., Noct., III, 314, pr. syn.
perlata Wlk.
1858. Wlk., C. B. Mus., Het., XIV, 1480, *Phurys.*
indentata Harv.
1875. Harv., Bull. Buff. Soc. Nat. Sci., II, 282, *Remigia.*
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 12, ? pr. var.
texana Morr.
1874. Morr., Proc. Bost., Soc. N. H., XVII, 219, ? pr. var.
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 12, pr. syn.
1875. Morr., Proc. Ac. Nat. Sci. Phil., 1875, 71, an sp. dist.
disseverans Wlk.
1858. Wlk., C. B. Mus., Het., XIV, 1495, *Remigia.*
var. **marcida** Gn.*
1852. Gn., Spec. Gen., Noct., III, 317, *Remigia.*
1858. Wlk., C. B. Mus., Het., XIV, 1495, *Remigia.*
hexastylus Harv.
1875. Harv., Bull. Buff. Soc. Nat. Sci., II, 285, *Remigia.*

HABITAT.—Labrador to Florida, to Texas; east of the Rocky Mountains; Texas in March, September, October, November; Florida in August and March; Delaware in May.

A typical specimen of *latipes* is in the British Museum and is very nearly like the type of *indentata* Harv., which is in the same collection. The type of *Phurys perlata* is a better marked specimen of the same species, and the type of *disseverans* is the pale, almost immaculate form. The type of *hexastylus* Harvey is in the British Museum, and is exactly like the type of *marcida* in the Jardin des Plantes. It is a larger form of the ordinary species, I believe. The species, according to Guenée, is widely distributed on both sides of the equator.

Genus **TRAMA** Harv.

1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 13.

T. detrahens Wlk.*

1858. Wlk., C. B. Mus., Het., XIV, 1834, *Poaphila.*
arrosa Harv.
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 13, *Trama.*

HABITAT.—Southern States; Florida in March; Texas in June and August; Mississippi.

The types are in the British Museum. The Walker type is a poor, worn example, but there is no doubt of its identity with Dr. Harvey's species.

T. hinna Geyer.*

1837. Geyer, Zutræge, V, 41, ff. 971, 972, *Acolasia.*
1852. Gn., Spec. Gen., Noct., III, 216, *Bendis.*
1858. Wlk., C. B. Mus., Het, XIV, 1339, *Bendis.*
1881. Grt., Can. Ent., XIII, 92, *Acolasia.*
1882. Grt., New List, 41, *Trama.*

HABITAT.—Georgia; Texas; Florida in March.

T. griseipennis Grt.

1882. Grt., Can. Ent., XIV, 183, *Trama.*

HABITAT.—Arizona.

The type is with Mr. Neumœgen.

Genus **EUTOREUMA** Grt.
1872. Grt., Trans. Am. Ent. Soc., IV, 21.

E. tenuis Grt. *

1872. Grt., Trans. Am. Ent. Soc., IV, 22, *Eutoreuma.*

HABITAT.—District of Columbia, in June and August; Alabama; Southern States; Texas, in August.

♂ and ♀ specimens, labelled "type," are in the collection of the American Entomological Society, and a "type" is also in the British Museum.

Genus **ISOGONA** Gn.
1852. Gn., Spec. Gen., Noct., III, 322.

I. natatrix Gn.

1852. Gn., Spec. Gen., Noct., III, 323, *Isogona.*
1858. Wlk., C. B. Mus., Het., XIV, 1516, *Isogona.*

HABITAT.—North America.

The type is probably with M. Oberthür. So far as I am aware this species has not been identified in American collections. I have made no effort to apply the description, which seems to indicate an easily recognizable form.

Genus **CAPNODES** Gn.
1852. Gn., Spec. Gen., Noct., III, 374.

C. californica Behr.

1870. Behr, Trans. Am. Ent. Soc., III, 23, *Capnodes.*

HABITAT.—California.

I have not seen this species, and have not at present any idea what it can be.

Genus **ANTICARSIA** Hbn.
1816. Hbn., Verzeichniss, 310.

A. gemmatilis Hbn. *

1818. Hbn., Zutræge, I, 26, f. 153, 154, *Anticarsia.*
1816. Hbn., Verzeichniss, 340, *Anticarsia.*
1852. Gn., Spec. Gen., Noct., III, 355, *Thermesia.*
1858. Wlk., C. B. Mus., Het., XIV, 1560, *Thermesia.*
1879. Grt., Can. Ent., XI, 179, *Anticarsia*—varieties.
1880. Grt., No. Amer. Ent., I, 103, varieties, *Anticarsia.*
1880. Grt., Can. Ent., XII, 86, *Anticarsia.*

HABITAT.—Wisconsin; Texas, in October; Central and Southern States.

A good series of specimens is in the British Museum.

Genus **ANTIBLEMMA** Hbn.

1816. Hbn., Verzeichniss, 341.

A. inexacta Wlk.*

1865. Wlk., C. B. Mus., Het., XXXIII, 1038, *Thermesia*.
canalis Grt.
1874. Grt., Bull. Bkln. Ent. Soc., II, 76, *Antiblemma*.
1878. Grt., Bull. Geol. Surv., IV, 185, *Antiblemma*.

HABITAT.—New York; Middle, Central, and Southern States.

The types are both in the British Museum.

A. guttula Hy. Edw.

1882. Hy. Edw., Papilio, II, 129, *Antiblemma*.

HABITAT.—Georgia.

The type is in the Edwards collection.

Genus **AGASSIZIA** Behr.

1870. Behr, Trans. Am. Ent. Soc., III, 23.

A. urbicola Behr.

1870. Behr, Trans. Am. Ent. Soc., III, 23, *Agassizia*.

HABITAT.—California.

I have seen no authentically named specimen of this species. Mr. Edwards told me, some years ago, that Dr. Behr had described a species of *Homopyralis* under the above name, but he was unwilling to make any positive statements in the matter.

Genus **EREBUS** Latr.

1810. Latr., Consid. gen. des Ins. et Crust., 365.

E. odora Linn.*

1758. Linn., Syst. Nat., ed. X, 505, *Bombyx*.
1764. Linn., Mus. Lud. Ulr., 374, *Attacus*.
1764. Clk., Icones, t. 50, f. 1, *Phalæna*.
1767. Linn., Syst. Nat., ed. XII, II, 811, *Attacus*.
1770. Drury, Illustr., I, pl. III, f. 1, *Phalæna*.
1779. Cram., Pap. Exot., II, 111, t. 169, f. *A, B*, *Phalæna*.
1781. Fabr., Spec. Ins., II, 210, *Noctua*.
1787. Fabr., Mant. Ins., II, 135, *Noctua*.
1788. Gmel., ed. XIII, Linn. Syst. Nat., 2528, *Noctua*.
1794. Fabr., Ent. Syst., III, 2, 10, *Noctua*.
1805. Beauv., Ins. Afr. and Am., pl. XXIII, f. 1, *Noctua*.
1811. Oliv., Encycl. Meth., VIII, 252, pl. 84, f. 2, *Erebus*.
1816. Hbn., Samml. Ex. Schmett., II, pl. 419, *Otosema*.
1816. Hbn., Verzeichniss, 273, *Otosema*.
1837. Wetw., ed. Dru., I, 6, pl. III, f. 1, *Erebus*.
1852. Gn., Spec. Gen., Noct., III, 167, *Erebus*.
1856. Lucas, in Sagra's Cuba, 308, *Erebus*.
1858. Wlk., C. B. Mus., Het., XIV, 1290, *Erebus*.
1869. H. Sch., Corr. Blatt, 1869, Cuba, 30, *Erebus*.
1869. Bethune, Can. Ent., I, 88, *Erebus*.
1870. Behr, Trans. Am. Ent. Soc., III, 23, *Erebus*.

1885. Gundlach, Cont. Ent. Cub., 367, *Erebus.*
1887. Fernald, Ent. Amer., III, 78, larva.
agarista Cram.
1779. Cram., Pap. Ex., II, 15, t. 170, f. *A*, *B*, *Phalæna.*
1788. Gmel., ed. Linn. Syst. Nat., 2529, pr. syn.

Habitat.—Canada to Florida; Colorado; California; usually in isolated specimens, and late in fall in the Northern States.

Genus **THYSANIA** Dalm.

1824. Dalman, Kongl. Vetensk. Acad. Handlingar, 1824, 407.

T. zenobia Cram.*

1779. Cram., Lep. Exot., II, 27, pl. 115, ff. *A. B.*, *Bombix.*
1781. Fabr., Spec. Ins., II, 209, *Noctua.*
1782. Drury Illustr., III, 39, f. 1, 2, *Bombix.*
1787. Fabr., Mant. Ins., II, 135, *Noctua.*
1788. Gmel., ed. XIII, Linn. Syst. Nat., 2529, *Noctua.*
1794. Fabr., Ent. Syst., III, 2, 8, *Noctua.*
1811. Oliv., Enc. Meth., VIII, 251, pl. 84, f. 1, *Noctua.*
1816. Hbn., Verzeichniss, 273, *Syrnia.*
1849. Westw., ed. Dru., III, 53, pl. 39, ff. 1, 2, *Erebus.*
1852. Gn., Spec. Gen., Noct., III, 163, *Thysania.*
1856. Lucas, in Sagra's Cuba, 308, *Thysania.*
1858. Wlk., C. B. Mus., Het., XIV, 1287, *Thysania.*
1869. H. Sch., Corr. Blatt, 1869, Cuba, 30, *Thysania.*
1885. Gundlach, Cont. Ent. Cub., 366, *Thysania.*

Habitat.—Florida; Southern States; occasional northward; Colorado.

Letis specularis Hbn., is hardly a North American species. It may have been occasionally found on our shores or within our boundaries; but I do not believe it a native entitled to be listed as a member of our fauna.

Genus **ZALE** Hbn.

1816. Hbn., Verzeichniss, 275.

Z. horrida Hbn.*

1818. Hbn., Zutræge, I, 11, ff. 31, 32, *Zale.*
1816. Hbn., Verzeichniss, 275, *Zale.*
1858. Wlk., C. B. Mus., Het., XIV, 1457, ? *Drasteria.*
1880. Grt., Can. Ent., XII, 85, *Zale.*
calycanthata ‡ Wlk.
1857. Wlk., C. B. Mus., Het., XIII, 1054, *Homoptera.*
1865. Beth., Can. Journal, X, 251, *Homoptera.*
1868. G. & R., Trans. Am. Ent. Soc., II, 79, pr. syn.
1880. Grt., Can. Ent., XII, 85, pr. syn.

Habitat.—Northern States, May and June; Texas, March and August; United States east of the Plains.

The specimen of *calycanthata* labeled by Walker is still in the British Museum collection and is as above referred.

Genus **PHÆOCYMA** Hbn.

1816. Hbn., Verzeichniss, 275.

P. lunifera Hbn.

1818. Hbn., Zutræge, 19, f. 97, 98, *Phæocyma.*
1816. Hbn., Verzeichniss, 275, *Phæocyma.*
1852. Gn., Spec. Gen., Noct., III, 3, pl. 15, f. 9, *Phæocyma.*
1857. Wlk., C. B. Mus., Het., XIII, 1045, *Phæocyma.*
1865. Bethune, Canadian Journal, x, 249, *Phæocyma.*
1878. Grt., Bull. Geol. Surv., IV, 185, *Pheocyma.*
1880. Grt., Can. Ent., XII, 87, *Pheocyma.*
lineosa Wlk.
1857. Wlk., C. B. Mus., Het., XIII, 1056, *Homoptera.*
1865. Bethune, Canadian Journal, x, 259, *Homoptera.*

HABITAT.—New York to Texas, to Illinois; Middle, Central, and Southern States; Colorada; Kansas; Texas in August.

Walker's type is in the British Museum, and is the species identified, correctly I think, as *lunifera* by Mr. Grote.

P. umbrina Grt.

1883. Grt., Can. Ent., XV, 3, *Pheocyma.*
1883. Grt., Can. Ent., XV, 123, *Ypsia.*

HABITAT.—Arizona.

The type is in the Neumœgen collection.

P. termina Grt.

1883. Grt., Can. Ent., XV, 129, *Pheocyma.*

HABITAT.—Arizona.

The type is in the Neumœgen collection.

Genus **HOMOPTERA** Bdv.

1829. Bdv., Icon. Regn. Anim.

H. lunata Dru.*

1770. Drury, Illustr., I, 40, pl. 20, f. 3, *Noctua.*
1782. Cram., Pap. Ex., IV., 38, pl. 308, f. C., *Phalæna.*
1830. Westw., ed. Dru., I, 37, pl. 20, f. 3, *Erebus.*
1852. Gn., Spec. Gen., Noct., III, 12, *Homoptera.*
1857. Wlk., C. B. Mus., Het., XIII, 1053, *Homoptera.*
1865. Bethune, Canadian Journal, x, 252, *Homoptera.*
1877. Bean, Can. Ent., IX, 174, 228, = *edusa.*
1882. French, Can. Ent., XIV, 131, life hist.
var. **edusa** Dru.*
1773. Drury, Illustr., II, pl. 24, f. 4, *Noctua.*
1830. Westw, ed. Drury, II, 46, pl. 24, f. 4, *Erebus.*
1852. Gn., Spec. Gen., Noct., III, 14, *Homoptera.*
1857. Wlk., C. B. Mus., Het., XIII, 1054, *Homoptera.*
1865. Bethune, Canadian Journal, x, 9, *Homoptera.*
1877. Bean, Can. Ent., IX, 174, 228, *Homoptera.*
1878. Lint., Ent. Cont., IV, 108, pr. syn.
putrescens Guer.
1829. Guer., Icon. Regne Anim., pl. 89, *Homoptera.*

1852. Gn., Spec. Gen., Noct., III, 14,=*edusa*, larva.
saundersii Beth.
1864. Beth., Proc. Ent. Soc., Phil., IV, 215, *Homoptera*.
1865. Beth., Canadian Journal, X, 257, *Homoptera*.
1877. Bean, Can. Ent., IX, 174, pr. syn.
1878. Lint., Ent. Cont., IV, 109, ? pr. syn.
viridans Wlk.
1857. Wlk., C. B. Mus., Het., XIII, 1064, *Homoptera*.
quadriplagiata Wlk.
involuta Wlk.
1857. Wlk., C. B. Mus., Het., XIII, 1055, *Homoptera*.
1865. Bethune, Canadian Journal, X, 253, *Homoptera*.

HABITAT.—Canada, May, June, and September; Texas to California, May and June; August to November in northern and eastern range; Texas in March, May, and October; United States generally.

The Walker types are all in the British Museum and all refer to the *edusa* form, *viridans* representing the darker specimens. Walker cites to *viridans*, *H. viridus* Gn., III, 13, described from South America, and refers both with a question to *lunata* Cram. I have not seen Guenée's type, and therefore cite Walker's name only in the synonyms. I can not find any description of *H. quadriplagiata*, but there may be such.

H. nigricans Beth.

1864. Bethune, Proc. Ent. Soc., Phil., IV, 214, *Homoptera*.
1865. Bethune, Canadian Journal, X, 252, *Homoptera*.

HABITAT.—Canada, August; Middle and Northern States.

The type is probably with Dr. Bethune.

H. rosæ Behr.

1870. Grt., Trans. Am. Ent. Soc., III, 28, *Homoptera*.

HABITAT.—California.

I have not seen the type.

H. rubi Edw.*

1881. Hy. Edw., Papilio, I, 28, *Homoptera*.

HABITAT.—California; Arizona.

Types are in the Edwards collection.

H. minerea Gn.*

1852. Gn., Spec. Gen., Noct., III, 15, pl. 18, f. 6, *Homoptera*.
1857. Wlk., C. B. Mus., Het., XIII, 1054, *Homoptera*.
1865. Bethune, Canadian Journal, X, 254, *Homoptera*.
obliqua ‡ Wlk.
1857. Wlk., C. B. Mus., Het., XIII, 1054, *Homoptera*.
1868. Grt. & Rob., Trans. Am. Ent. Soc., II, 79, pr. syn.

HABITAT.—Canada; North America in May and June; Middle, Central, and Southern States.

I have not seen the type which is in the Oberthür collection; but the figure is unmistakable. The specimen named *minerea* in the British

Museum is a small form of *lunata*, with much blue powdering. A specimen similar to it from Dr. Bailey, Center, N. Y., is in the Grote collection, without specific name.

H. calycanthata S. & A.*

1797. S. & A., Ins. Ga., II, 207, pl. 104, *Phalœna.*
1816. Hbn., Verzeichniss, 275, *Phæocyma.*
1852. Gn., Spec. Gen., Noct., III, 15, *Homoptera.*

HABITAT.—Canada in May; Massachusetts in May and June; Illinois in August; New York and southward to Florida and Texas; Portland, Oregon, April and May; Colorado.

H. cingulifera Wlk.*

1857. Wlk., C. B. Mus., Het., XIII, 1056, *Homoptera.*
intenta Wlk.
1857. Wlk., C. B. Mus., Het., XIII, 1070, *Homoptera.*
woodii Grt.
1877. Grt., Can. Ent., IX, 88, *Homoptera.*

HABITAT.—Massachusetts in July; New York to Florida; Central States; Wisconsin.

The types of all the names are in the British Museum, and all refer to this one, very distinct species.

H. salicis Behr.

1872. Behr, Trans. Am. Ent. Soc., III, 28, *Homoptera.*

HABITAT.—California.

The type is probably with Dr. Behr. I do not know the species.

H. albofasciata Beth.

1865. Bethune, Canadian Journal, X, 256, *Homoptera.*

HABITAT.—Canada in May and June.

The type is probably with Dr. Bethune.

H. edusina Harv.*

1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 14, *Homoptera.*
atritincta Harv.
1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 14, *Homoptera.*
1878. Grt., Bull. Geol. Surv., IV, 185, =♀ prec.

HABITAT.—Texas, February, March, and May.

The types are in the British Museum, and refer to one species without much doubt. I am not so sure that the differences between them are sexual; but believe that males and females of both forms occur.

H. galbanata Morr.

1875. Morr., Proc. Ac. Nat. Sci., Phil., 1875, 435, *Homoptera.*

HABITAT.—Nebraska.

I have no information concerning the type of this species.

H. uniformis Morr.

1875. Morr., Can. Ent., VII, 148, *Homoptera.*

HABITAT.—Georgia.

The type is in the Tepper collection.

H. cinerea Morr.

1875. Morr., Can. Ent., VII, 148, *Homoptera.*

HABITAT.—Massachusetts.

I have no information as to the type of this species.

H. penna Morr.

1875. Morr., Proc. Bost. Soc. N. H., XVIII, 241, *Homoptera.*
1878. Grt., Bull. Geol. Surv., IV, 185. *Phœocyma.*

HABITAT.—Illinois; Middle and Central States.

I have not seen the type.

H. unilineata Grt.*

1876. Grt., Can. Ent., VIII, 108, *Homoptera.*
1883. Grt., Can. Ent., XV, 123, *Homoptera.*

HABITAT.—Canada; Eastern, Middle and Central States, May; District of Columbia in April.

The type is in the British Museum.

H. obliqua Gn.*

1852. Gn., Spec. Gen., Noct., III, 16, pl. XV, f. 7, *Homoptera.*

HABITAT.—Middle, Eastern and Central States, May and June.

The type is probably with M. Oberthür. The British Museum specimen is a rubbed *lunata*, and does not agree with Guenée's figure. In the Grote collection there are specimens which are, I believe, correctly determined.

H. duplicata Beth.*

1856. Bethune, Canadian Journal, X, 257, *Homoptera.*

HABITAT.—Canada; Northern and Middle States; Washington in September.

The type is probably with Dr. Bethune.

H. benesignata Harv.

1875. Harv., Bull. Buff. Soc. Nat. Sci., III, 11, *Homoptera.*

HABITAT.—Canada.

The type is in the British Museum.

H. declarans Wlk.

1857. Wlk., C. B. Mus., Het., XIII, 1057, *Homoptera.*

HABITAT.—"East Florida,"

The type in the British Museum looks very much like a *Ph. lunifera*, with very pale ground color, distinct dark basal space, and black reniform. The two exterior lines are close together, distinct, the intervening space distinctly yellow. It is not in the Grote collection and seems a good species.

Genus **CAMPOMETRA** Gn.

1852. Gn., Spec. Gen., Noct., III, 25.

C. amella Gn.

1852. Gn., Spec. Gen., Noct., III, 25, pl. 18, f. 8, *Campometra.*
1857. Wlk., C. B. Mus., Het., XIII, 1084, *Campometra.*

HABITAT.—Georgia.

The type is with M. Oberthür. I am not aware that this species has been identified in American collections. The figure represents a very familiar-looking form; but I have not tried to apply it. In the Neumœgen collection Mr. Grote has suggested its identity with *Eubolina stylobata*, and perhaps that is correct.

Genus **EUBOLINA** Harv.

1875. Harv., Bull. Buff. Soc. Nat. Sci., II, 281.

E. impartialis Harv.

1875. Harv., Bull. Buff. Soc. Nat. Sci., II, 281, *Eubolina.*

HABITAT.—Texas in July.

The type is in the British Museum. I have a compared specimen.

E. integerrima Wlk.*

1857. Wlk., C. B. Mus., Het., XIII, 1057, *Homoptera.*
stylobata Harv.
1876. Harv., Can. Ent., VIII, 155, *Homoptera.*
1882. Grt., New List, 42, *Eubolina.*

HABITAT.—Texas in May and June; East Florida; Colorado.

Both types are in the British Museum, and refer without doubt to one species only.

E. mima Harv.*

1876. Harv., Can. Ent., VIII, 155, *Homoptera.*
1882. Grt., New List, 42, *Eubolina.*

HABITAT.—Texas; Colorado; Arizona.

The type is in the British Museum.

E. meskei Hy. Edw.*

1882. Hy. Edw., Papilio, II, 128, *Eubolina.*

HABITAT.—Texas.

The type, from the Meske collection, is in the U. S. National Museum.

Genus **YPSIA** Gn.

1852. Gn., Spec. Gen., Noct., III, 16.

Y. undularis Dru.*

1770. Drury, Illustr., I, pl. IX, f. 4, *Noctua.*
1816. Hbn., Verzeichniss, 275, *Anthracia.*
1852. Gn., Spec. Gen., Noct., III, 18, *Ypsia.*

1857. Wlk., C. B. Mus., Het., XIII, 1074, *Ypsia.*
var. **æruginosa** Gn.*
1852. Gn., Spec. Gen., Noct., III, 17, pl. XVIII, f. 7, *Ypsia.*
1857. Wlk., C. B. Mus., Het., XIII, 1074, *Ypsia.*
1865. Bethune, Canadian Journal, X, 259, *Ypsia.*
1878. Grt., Bull. Geol. Surv., IV, 185, *Ypsia.*
1883. Grt., Papilio, III, 73, pr. syn.
plenipennis Wlk.
1857. Wlk., C. B. Mus., Het., XIII, 1055, *Homoptera.*
var. **umbripennis** Grt.*
1877. Grt., Can. Ent., VIII, 109, *Homoptera.*

HABITAT.—Canada and Northern States, May, June, and August, to Florida; Colorado.

The Walker types are in the British Museum. A type of *æruginosa* is in the Jardin des Plantes, agreeing with the identification in American collections.

Genus **PSEUDANTHRACIA** Grt.

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 46.

P. coracias Gn.*

1852. Gn., Spec. Gen., Noct., III, 19, *Anthracia.*
1857. Wlk., C. B. Mus., Het., XIII, 1075,=*squammularis.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 46, *Pseudanthracia.*
squammularis, Dru.
1770. Drury, Illustr., I, 18, pl, IX, f. 3, *Noctua.*
1857. Wlk., C. B. Mus., Het., XIII, 1075, *Anthracia.*
1865. Bethune, Canadian Journal, X, 218, *Anthracia.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 46, ? pr. syn.

HABITAT.—Canada to Florida; Central States; New Mexico; Texas in March and December.

The above is the synonymy given by Mr. Grote, who seems to doubt the correctness of Walker's reference. I have made no attempt to get at the truth myself, and give the bibliography as I find it. I have not seen Guenée's type. The *squammularis* of the British Museum collection (Walker) is *Ypsia undularis.*

P. cornix Gn.

1852. Gn., Spec. Gen., Noct., III, 19, pl. XV, f. 8, *Anthracia.*
1857. Wlk., C. B. Mus., Het., XIII, 1075, *Anthracia.*
1865. Bethune, Canadian Journal X, 219, *Anthracia.*

HABITAT.—North America.

The species was described from the Boisduval collection, and the type is probably with M. Oberthür.

Genus **SELENIS** Gn.

1852. Gn., Spec. Gen., Noct., III, 361.

S. monotropa Grt.*

1876. Grt., Can. Ent., VIII, 207, *Selenis.*

HABITAT.—Texas.

The type is in the British Museum.

Genus **YRIAS** Gn.

1852. Gn., Spec. Gen., Noct., III, 21.

Y. clientis Grt.*

1882. Grt., Can. Ent., XIV, 236, *Yrias*.

HABITAT.—Arizona.

Types are in the Neumœgen collection and in the National Museum.

Y. volucris Grt.

1883. Grt., Can. Ent., XV, 3, *Yrias*.

HABITAT.—Arizona.

The type is with Mr. Neumœgen.

Y. repentis Grt.*

1881. Grt., Papilio, I, 165, *Homopyralis*.
1882. Grt., Can. Ent., XIV, 234, *Yrias*.

HABITAT.—Arizona.

The type is with Mr. Neumœgen.

Y. crudelis Grt.*

1882. Grt., Can. Ent., XIV, 237, *Yrias*.

HABITAT.—Arizona; Texas, in March; California.

A type is with Mr. Neumœgen; another in the National Museum.

Genus **HOMOPYRALIS** Grt.

1874. Grt., Proc. Ac. Nat. Sci. Phil., 213.

H. discalis Grt.*

1876. Grt., Can. Ent., VIII, 206, *Homopyralis*.

HABITAT.—Canada; Northern, Middle and Central States; New Mexico; June to August in New York.

The type is in the British Museum.

H. contracta Wlk.*

1860. Wlk., Can. Nat. and Geol., V, 258, *Homoptera*.
1865. Bethune, Canadian Journal, X, 258, *Homoptera*.
1877. Grt., Can. Ent., IX, 28,=*Homopyralis tactus*.
zonata Wlk.
1865. Wlk., C. B. Mus., Het., XXXIII, 878, *Homoptera*.
tactus Grt.
1874. Grt., Proc. Ac. Nat. Sci. Phil., 1874, 213, *Homopyralis*.
1877. Grt., Can. Ent., IX, 28, pr. syn.

HABITAT.—Canada to Florida, to Texas; northern range in June and July; District of Columbia in August; Delaware in June.

The types of *zonata* and *tactus* are in the British Museum, and these are undoubtedly alike, specifically. Mr. Grote refers *contracta* positively to *tactus*, but continues to use his own specific name. The type of *contracta* is in the collection of the Entomological Society of Ontario.

H. tantillus Grt.*

1874. Grt., Proc. Ac. Nat. Sci. Phil., 1874, 214, *Homopyralis.*

HABITAT.—New York to Texas; Central States; Florida in March; Texas, March to July, and October.

The type is in the British Museum.

H. miserulata Grt.

1882. Grt., Can. Ent., XIV, 185, *Homopyralis.*
1883. Grt., Can. Ent., XV, 123, *Homopyralis.*

HABITAT.—New Mexico.

The type is in the Neumœgen collection.

Genus MATIGRAMMA Grt.

1872. Grt., Trans. Am. Ent. Soc., IV, 22.

M. pulverilinea Grt.

1872. Grt., Trans. Am. Ent. Soc., IV, 22, *Matigramma.*

HABITAT.—Southern States; Texas in March, April, June, and September.

A type is in the British Museum; another in the collection of the American Entomological Society.

M. pulverosa Wlk.

1865. Wlk., C. B. Mus., Het., XXXIII, 994, *Poaphila.*
læna Harv.

HABITAT.—Texas in March, May, and July.

Both the types are in the British Museum; but I have not succeeded in finding a description of *M. læna.* I presume such exists, for the species is correctly known in American collections; but I have not seen it.

M. rubrosuffusa Grt.

1882. Grt., Can. Ent., XIV, 172, *Matigramma.*
1883. Grt., Can. Ent., XV, 123, *Matigramma.*

HABITAT.—Arizona.

The type is in the Neumœgen collection.

Genus ARGILLOPHORA Grt.

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 124.

A. furcilla Grt.

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 124, *Argillophora.*

HABITAT.—Alabama.

The type is in the British Museum. It is an odd species, which I had never before seen.

Genus **HYAMIA** Wlk.

1858. Wlk., C. B. Mus., Het., XVI, 72.

H. perditalis Wlk.*

1858. Wlk., C. B. Mus., Het., XVI, 234, *Hyamia.*
semilineata Wlk.
1865. Wlk., C. B. Mus., Het., XXXIII, 1102, *Legna.*
umbrifascia, Grt.
1873. Grt., Trans. Am. Ent. Soc., IV, 301, *Spargaloma.*

HABITAT.—Massachusetts in July; Middle States to Texas; New Mexico; District of Columbia in August; Texas in May and June.

The types are all in the British Museum. It is possible that *Hyamia* may have another type, not congeneric with *perditalis.* In that case *Legna* must be used, as the type and only species is *semilineata. Spargaloma* Grt., is antedated in any case. *H. perditalis* is from "locality unknown," but is evidently this species.

H. sexpunctata Grt.*

1873. Grt., Trans. Am. Ent. Soc., IV, 300, pl. i, f. 90, *Spargaloma.*

HABITAT.—Massachusetts in July; Middle States to Texas; New Mexico.

The type is in the British Museum.

H. punctipennis Grt.

1883. Grt., Can. Ent., XV, 122, *Spargaloma.*

HABITAT.—Arizona.

The type is in the Neumœgen collection.

Genus **HEXERIS** Grt.

1875. Grt., Can. Ent., VII, 176.

H. enhydris Grt.

1875. Grt., Can. Ent., VII, 176, *Hexeris.*

HABITAT.—Florida.

A very distinct form, the type of which is in the British Museum. I had not seen it previously.

Genus **SYLECTRA** Hbn.

1816. Hbn., Verzeichniss, 341.

S. erycata Cram.

1782. Cram., Pap. Exot., III, 170, pl. 287, f. *D, E, Phalæna.*
1782. Cram., Pap. Exot., IV, 157, pl. 370, f. *E., Phalæna.*
1802. Latr., Gen. Crust. et Ins., IV, 228, *Herminia.*
1816. Hbn., Verzeichniss, 342, *Sylectra mirandalis.*
1852. Gn., Spec. Gen., Noct., III, 340, *Teratocera.*
1858. Wlk., C. B. Mus., Het., XIV, 1542, *Teratocera.*
1864. Grt., Proc. Ent. Soc. Phil., II, 441, *Sylectra.*
mirandalis Hbn.
1816. Hbn., Verzeichniss, 342, *Sylectra.*

HABITAT.—New York; Florida; Gulf States, southward.

A peculiar tropical form which has lost its way, apparently.

Hübner, in the Verzeichniss, cites *erycata* Cram., as a synonym to *mirandalis*—*Salia egregia mirandalis*—without explanation or reference to any description of his species.

Genus **PANGRAPTA** Hbn.

1816. Hbn., Verzeichniss, 343.

P. decoralis Hbn.*

1818. Hbn., Zuträge, I, 18, ff. 93, 94, *Pangrapta*.
1816. Hbn., Verzeichniss, 343, *Pangrapta*.
1872. Grt., Trans. Am. Ent. Soc., IV, 91, *Pangrapta*.
geometroides Gn.
1852. Gn., Spec. Gen., Noct., III, 371, *Marmorinia*.
1858. Wlk., C. B. Mus., Het., XIV, 1598, *Marmorinia*.
epionoides Gn.
1852. Gn., Spec. Gen., Noct., III, 371, *Marmorinia*.
1858. Wlk., C. B. Mus., Het., XIV, 1597, *Mamorinia*.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 47 pr. syn.
elegantalis Fitch.
1856. Fitch, 1st and 2nd Rept. Ins. N. Y., 327, pl. I, f. 2, *Hypena*.
1872. Grt., Trans. Am. Ent. Soc., IV, 92, pr. syn.
1880. Grt., Can. Ent., XII, 87, pr. syn.
recusans Wlk.
1866. Wlk., C. B. Mus., XXXV, 1970, *Thyridospila*.

HABITAT.—Nova Scotia to Florida; Texas; Central States; New York, June to August; District of Columbia, in August.

Guenée's type of *epionoides* is in the Jardin des Plantes, where I did not find it. The type of *geometroides* is in the Boisduval collection, now with M. Oberthür. Walker's type is in the British Museum, where I have examined it. Fitch's type I have seen, but do not know where it is at present. A careful comparison of Guenée's descriptions with a long series of specimens leaves no reasonable doubt that this species is intended.

Genus **PHALÆNOSTOLA** Grt.

1873. Grt., Trans. Am. Ent. Soc., IV, 302.

P. larentioides Grt. *

1873. Grt., Trans. Am. Ent., Soc., IV, 302, *Phalænostola*.
var. **citima** Grt.
1873. Grt., Trans. Am. Ent. Soc., IV, 303, *Phalænostola*.
1882. Grt., New List, 42, pr. var.

HABITAT.—Middle, Central, and Southern States; New York, in June and August; District of Columbia, in June; Missouri, in August.

The type is in the British Museum.

Genus **PSEUDAGLOSSA** Grt.

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 47.

P. lubricalis Geyer. *

1832. Geyer, Zuträge, IV, 19, ff. 665, 666, *Epizeuxis*.
1854. Gn., Spec. Gen., Delt., 77, *Helia*.
1859. Wlk., C. B. Mus., Het., XVI, 135, *Epizeuxis*.

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 47, *Pseudaglossa.*
1881. Grt. Can. Ent., XIII, 91, *Epizeuxis.*
1880. Coquillett, Can. Ent., XII. 44, larva.
phœalis Gn.
1854. Gn., Spec. Gen., Delt., 76, *Helia.*
1859. Wlk., C. B. Mus., Het., XVI, 133, *Epizeuxis.*
1873. Grt., Trans. Am. Ent. Soc., IV, 308, *Helia.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 47, pr. syn.
1883. Grt., Can. Ent., XIII, 91, pr. syn.
surrectalis Wlk.
1859. Wlk., C. B. Mus., Het., XVI, 241, *Bleptina.*
1877. Grt., Can. Ent., IX, 29, pr. syn.
var. **occidentalis** Smith.
1884. Smith, Bull. Bkln. Ent. Soc., VII, 5, pr. var.

HABITAT.—United States, generally; Canada, in July; New York, June, July, August; Illinois, August, September; Texas, May to July, October; Colorado in October; Kansas in August; Nova Scotia.

Guenée himself suggested the identity of his *phœalis* with *lubricalis;* but, as Geyer recorded his species from Java, he kept his own specific term. Some other of Geyer's "Java" species are American, and I believe Mr. Grote was correct in making Guenée's suggestion a positive reference. The type of *surrectalis* is in the British Museum and is correctly referred by Mr. Grote. My types are in the National Museum and in the Edwards collection.

P. denticulalis Harv.*

1875. Harv., Bull. Buff. Soc. Nat. Sci., II, 283, *Pseudaglossa.*

HABITAT.—Middle, Eastern, and Central States; District of Columbia, July and August.

The type is in the British Meuseum.

P. scobialis Grt.*

1880. Grt., No. Amer. Ent., I, 95, *Pseudaglossa.*

HABITAT.—Eastern, Middle, and Central States; New York, June and July.

The type is in the British Museum.

P. rotundalis Wlk.*

1865. Wlk., C. B. Mus., Het., XXXIV, 1144, *Hormisa.*
borealis Smith.
1884. Smith, Bull. Bkln. Ent. Soc., VII, 5, *Helia.*

HABITAT.—Canada to Maryland to Illinois; Eastern, Middle, Central, and Southern States; District of Columbia in August.

The Walker type is in the British Museum and is the same as my *borealis*, the type of which is in the National Museum.

I have retained Mr. Grote's generic term for the preceding species, and use *Epizeuxis* instead of *Helia* for those following, pending the revisional study of this series, when the types can be fixed.

Genus **EPIZEUXIS** Hbn.

1816. Hbn., Verzeichniss, 316.

E. æmula Hbn.*

1815. Hbn., Ex. Schmett., III, 1, G. a., *Idiadolosa.*
1816. Hbn., Verzeichniss, 316, *Epizeuxis.*
1854. Gn., Spec. Gen., Delt., 78, *Helia æmulalis.*
1859. Wlk., C. B. Mus., Het., XVI, 134, *Epizeuxis.*
1873. Grt., Trans. Am. Ent. Soc., IV, 307, *Epizeuxis.*
mollifera Wlk.
1858. Wlk., C. B. Mus., Het., XV, 1765, *Microphysa.*
1868. G. & R., Trans. Am. Ent. Soc., II, 79, *Epizeuxis.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 47, pr. syn.
herminioides Wlk.
1860. Wlk., Can. Nat. and Geol., V, 259, *Homoptera.*
1865. Bethune, Canadian Journal, X, 258, *Homoptera.*
1877. Grt., Can. Ent., IX, 28, *Epizeuxis.*
effusalis Wlk.
1860. Wlk., Can. Nat. and Geol., V, 264, *Hormisa.*
1877. Grt., Can. Ent., IX, 29, pr. syn.
concisa Wlk.
1860. Wlk., Can. Nat. and Geol., V, 265, *Hormisa.*
1877. Grt., Can. Ent., IX, 29, pr. syn.

HABITAT.—Canada, New York, and Northern States, July to September; South and West to Texas in March, April, and July; New Mexico; Colorado in September.

The type of *mollifera* is in the British Museum and is correctly referred. Mr. Grote has placed *Hormisa absorptalis* to this same form; but this is an error: it is really *Litognatha nubilifascia.* The types of *effusalis* and *concisa* are in the collection of the Entomological Society of Ontario, and these have been positively referred to *æmula* by Mr. Grote. The type of *herminioides* , from the same collection, was referred to *Epizeuxis* by Mr. Grote. If this generic reference is correct, the description will apply to *æmula* rather than *americalis*, and I have so referred the species.

E. americalis, Gn.*

1854. Gn., Spec. Gen., Delt., 78, pl. 6, f. 5, *Helia.*
1859. Wlk., C. B. Mus., Het., XVI, 134, *Epizeuxis.*
1873. Gn., Trans. Am. Ent. Soc., IV, 307, *Epizeuxis.*
1883. Riley, Can. Ent., XV, 171, larva.
scriptipennis Wlk.
1858. Wlk., C. B. Mus., Het., XV, 1765, *Microphysa.*
1868. G. & R., Trans. Am. Ent. Soc., II, 79, pr. syn.
1873. Grt., Trans. Am. Ent. Soc., IV, 307, pr. syn.

HABITAT.—Canada and New York, July to September; to Texas. July and November; east of the Rocky Mountains; New Mexico.

Guenée's type is probably with M. Oberthür. The type of *scriptipennis* is in the British Museum, where there is also a specimen bearing the name *pulverosa* in Walker's handwriting.

Genus **MEGACHYTA** Grt.

1873. Grt., Trans. Am. Ent. Soc., IV, 306.

M. lituralis Hbn.*

1818. Hbn., Zutræge, I. 9, f. 19, 20, *Epizeuxis.*
1816. Hbn., Verzeichniss, 346, *Epizeuxis.*
1854. Gn., Spec. Gen., Delt., 79, *Helia.*
1859. Wlk., C. B. Mus., Het., XVI, 134, *Epizeuxis.*
1872. Zeller, Verh. k. k. zoöl. bot. Ges., XXII, 473, *Zanclognatha.*
1873. Grt., Trans. Am. Ent. Soc., IV, 306, *Megachyta.*

HABITAT.—Canada to Florida and Texas; Central States; New York and Delaware in June; District Columbia in August.

M. theralis Wlk.*

1859. Wlk., C. B. Mus., Het., XIX, 855, *Herminia.*
deceptricalis Zell.
1872. Zeller, Verh. k. k. zoöl. bot. Ges., XXII, 473, *Zanclognatha.*
var. **gypsalis** Grt.
1880. Grt., Bull. Bkln. Ent. Soc., III, 65, *Megachyta.*

HABITAT.—Nova Scotia to North Carolina, to Ohio.

Walker's type is in the British Museum, and is the *deceptricalis* of the Grote collection and of Zeller. The type of *gypsalis*, also in the Museum, is a partly suffused form, scarcely worthy of a varietal name.

M. inconspicualis Grt.

1883. Grt., Can. Ent., XV, 30, *Megachyta.*

HABITAT.—New York.

The type is in the Hill collection.

Genus **HORMISA** Wlk.

1859. Wlk., C. B. Mus., Het., XVI, 74.

H. absorptalis Wlk.*

1859. Wlk., C. B. Mus., Het., XVI, 74, *Hormisa.*
nubilifascia Grt.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 85, pl. 2, f. 2, 3, *Litognatha.*

HABITAT.—Canada to Virginia; Central States; New York, in July.

Both types are in the British Museum. Mr. Grote refers *absorptalis* to *Epizeuxis æmula*, and at first sight this appears correct, from the rubbed condition of the specimen; but more careful comparisons show that the species named by Mr. Grote *nubilifascia* is represented. The present species is fairly to be considered the type of *Hormisa*, and must replace *Litognatha*, which has the same type. A type of *nubilifascia* is also in Dr. Lintner's collection.

H. litophora Grt.

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 86, *Litognatha.*

HABITAT.—Middle and Central States.

The types are in the British Museum and in Dr. Lintner's collection.

H. linearis Grt.

1883. Grt., Can. Ent., XV, 121, *Litognatha.*

HABITAT.—Arizona.

The type is in the Neumœgen collection.

Genus **HERMINIA** Latr.

1802. Latr., Gen. Crust. et Ins., III, 413, et IV, 2281

I use the term *Herminia* in preference to *Chytolita* Grt., because I can not find any sufficient differences between them. The genera need revision.

H. morbidalis Gn.*

1854. Gn., Spec. Gen., Delt., 56, pl. 6, f. 3, *Herminia.*
1859. Wlk., C. B. Mus., Het., XVI, 103, *Herminia.*
1872. Grt., Trans. Am. Ent. Soc., IV, 96, *Herminia.*
1873. Grt., Trans. Am. Ent. Soc., IV, 309, *Chytolita.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 39, *Chytolita.*
1880. Coquillett, Can. Ent., XII, 44, larva.

HABITAT.—Nova Scotia; southward to Virginia; Central States; Canada and New York in June and July.

The types are probably with M. Oberthür.

H. petrealis Grt.*

1880. Grt., Can. Ent., XII, 219, *Chytolita.*

HABITAT.—Middle and Central States; Canada.

The type is in the British Museum.

Genus **PITYOLITA** Grt.

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 39.

P. pedipilalis Gn.*

1854. Gn., Spec. Gen., Delt., 57, *Herminia.*
1859. Wlk., C. B. Mus., Het., XVI, 57, *Herminia.*
1872. Grt., Trans. Am. Ent. Soc., IV, 96, *Herminia.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 39, *Pityolita.*

HABITAT.—Middle and Central States; Virginia; New York in June; Missouri in June; District of Columbia in August; Delaware in May.

The type is probably with M. Oberthür. In the British Museum are specimens of this species and of *morbidalis*, apparently named by Guenée.

Genus **ZANCLOGNATHA** Led.

1857. Lederer, Noct. Europ., 211.

Z. lævigata Grt.*

1872. Grt., Trans. Am. Ent. Soc., IV, 95, *Herminia.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 39, *Zanclognatha.*
1878. Grt., Bull. Geol. Surv., IV, 186, *Zanclognatha.*

HABITAT.—Canada to Southern States; Central States; Canada and New York in July.

Types are in the collection of the American Entomological Society and in the British Museum. This species is the *cruralis* of the British collection; but not of Guenée's description, which I believe has been correctly interpreted by Mr. Grote.

Z. obsoleta Smith. *

1884. Smith, Bull. Bkln. Ent. Soc., VII, 5, *Zanclognatha.*

HABITAT.—Vermont in August.

The type is in the National Museum.

Z. ochreipennis Grt.*

1872. Grt., Trans. Am. Ent. Soc., IV, 98, *Herminia.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 39, *Zanclognatha.*

HABITAT.—Canada to Virginia; Central States; Canada and New York in July; Delaware and District of Columbia in August.

The type is in the collection of the American Entomological Society.

Z. cruralis Gn.*

1854. Gn., Spec. Gen., Delt., 58, *Herminia.*
1859. Wlk., C. B. Mus., Het., XVI, 103, *Herminia.*
1872. Grt., Trans. Am. Ent. Soc., IV, 97, *Herminia.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I. 39. *Zanclognatha.*
jacchusalis Wlk.
1859. Wlk., C. B. Mus., Het., XVI, 104, *Herminia.*

HABITAT.—Nova Scotia to Virginia; Central States; New Mexico; New York and Illinois in July and August; District of Columbia in August.

The type of *cruralis* is probably with Mr. Oberthür. The Walker type is in the British Museum and is the *cruralis* of Guenée, but not of Walker. The latter is *lævigata* Grt.

Z. marcidilinea Grt.*

1872. Grt., Trans. Am. Ent. Soc., IV, 93 et 309, *Herminia.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 39, *Zanclognatha.*

HABITAT.—New York to Alabama; Central States; Adirondack Mountains, July and September; Delaware in July.

The type is in the collection of the American Entomological Society. The *Z. ochreipennis* and *marcidilinea* of the British Museum are the same species. There is more difference between the types.

Z. obscuripennis Grt.

1872. Grt., Trans. Am. Ent. Soc., IV, 98 and 309, *Herminia.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 39, *Zanclognatha.*

HABITAT.—New York to Alabama.

The types are in the collection of the American Entomological Society and the British Museum. It is more than likely that this will prove a dark form of *ochreipennis.* The species need revision, and as the types are mostly in Philadelphia the work will not be difficult.

Z. protumnusalis Wlk.*

1859. Wlk., C. B. Mus., Het., XVI, 104, *Herminia.*
minimalis Grt.
1878. Grt., Bull. Geol. Surv., IV, 186, *Zanclognatha.*
1891. Smith, List Lepid., 63, pr. syn.

HABITAT.—Canada; Middle and Central States; District of Columbia in August.

The types are both in the British Museum and are alike. I have a carefully compared specimen.

Genus **CLEPTOMITA** Grt.

1873. Grt., Trans. Am. Ent. Soc., IV, 301.

C. atrilineella Grt.

1873. Grt., Trans. Am. Ent. Soc., IV, 301, *Cleptomita.*

HABITAT.—Texas.

I have somewhere seen a specimen of this species marked type; but I have no memorandum concerning it and can not now recollect the circumstances. A specimen is in the collection of the American Entomological Society, and this may be the type of my recollection, though not now so marked.

Genus **PALLACHIRA** Grt.

1877. Grt., Can. Ent., IX, 197.

P. bivittata Grt.*

1877. Grt., Can. Ent., IX, 198, *Pallachira.*

HABITAT.—Canada; Northern, Middle, and Central States; occasional.

The type is with Dr. Thaxter.

Genus **PHILOMETRA** Grt.

1872. Grt., Trans. Am. Ent. Soc., IV, 99.

P. goasalis Wlk.*

1859. Wlk., C. B. Mus., Het., XVI, 134, *Epizeuxis.*
1859. Wlk., C. B. Mus., Het., XIX, 876, *Epizeuxis.*
metonalis Wlk.
1859. Wlk., C. B. Mus., Het., XVI, 236, *Herminia.*
longilabris Grt.
1872. Grt., Trans. Am. Ent. Soc., IV, 99, 309, *Philometra.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 40, *Philometra.*

HABITAT.—Nova Scotia; Hudson's Bay Territory to Virginia; Central States; June, July, and August.

Walker's types are in the British Museum and agree with each other and with the Grote type in the collection of the American Entomological Society. The latter type has just body enough remaining to hold the wings together. Head, feet, and everything else are gone. Under *goasalis* Walker has also a specimen of *Herminia petrealis* Grt., which he did not recognize as distinct.

P. eumelusalis Wlk.*

1859. Wlk., C. B. Mus., Het., XVI, 105, *Herminia*.
serraticornis Grt.
1872. Grt., Trans. Am. Ent. Soc., IV, 98, 309, *Philometra*.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 40, *Philometra*.
1891. Smith, List Lepid., 63, pr. syn.

HABITAT.—Canada and New York, in July, to Virginia; Central States.

The type of *eumelusalis* is in the British Museum, that of *serraticornis* is in the collection of the American Entomological Society. The latter consists of wings only, with a piece of thorax to hold them together.

Genus **SALIA** Hbn.

1816. Hbn., Verzeichniss, 339.

S. interpuncta Grt.*

1872. Grt., Trans. Am. Ent. Soc., IV, 93, *Madopa*.
1873. Grt., Trans. Am. Ent. Soc., IV, 309, *Calobochila*.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 170, *Calobochila*.
1875. Grt., Bull. Buff. Soc. Nat. Sci., II, 223, *Salia*.
1880. Grt., Can. Ent., XII, 220, *Salia*.
saligna Zell.
1872. Zell., Verh. k. k. zoöl. bot. Ges., XXII, 462, *Calobochila*.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 170, pr. syn.

HABITAT.—Massachusetts to Florida and Texas.

I have not seen the type.

S. rufa Grt.*

1883. Grt., Can. Ent., XV, 31, *Salia*.

HABITAT.—Arizona.

The types are in the National Museum and in the Neumœgen collection.

Genus **RIVULA** Gn.

1854. Gn., Spec. Gen., Delt., 47.

R. propinqualis Gn.*

1854. Gn., Spec. Gen., Delt., 49, *Rivula*.
1859. Wlk., C. B. Mus., Het., XV, 93, *Rivula*.
1875. Speyer, Stett. Ent. Zeit., XXXVI, 169, *Rivula*.

HABITAT.—Nova Scotia to Texas; Central States. Canada in June; New York, June and July; District of Columbia in August.

The type is in the British Museum.

R. tripla Grt.

HABITAT.—Arizona; New Mexico.

The type is in the Neumœgen collection and is not a *Rivula*, probably not even a Deltoid. The neuration is normally noctuidous, not aberrant as in *Rivula*, but otherwise I have had no opportunity of trying to ascertain its true position. I have found no description of the species and perhaps this is a mere collection name which should not be criticised.

Genus **PALTHIS** Hbn.

1816. Hbn., Verzeichniss, 312.

P. angulalis Hbn.*

1796. Hbn., Schmett. Eur., Pyr., f. 107, *Pyralis.*
1816. Hbn., Verzeichniss, 312, *Palthis.*
1825. Tr., Schmett. Eur., v, 36, Hypena.
1852. H. Sch., Eur. Schmett., vi, 382, *Herminia.*
1854. Gn., Spec. Gen., Delt., 95, *Clanyma.*
1859. Wlk., C. B. Mus., Het., xvi, 152, *Palthis.*
1872. Grt., Trans. Am. Ent. Soc., iv, 107, *Clanyma.*
1873. Grt., Trans. Am. Ent. Soc., iv, 309, *Palthis.*
aracinthusalis Wlk.
1859. Wlk., C. B. Mus., Het., xvi, 157, *Mardara.*

Habitat.—Canada, in June, to Texas; Central States; New York, June to August; Missouri, May and June; District of Columbia, in May.

Walker's type is in the British Museum and is this common species. No locality was given and both generic and specific descriptions are such that recognition was out of question.

P. asopialis Gn.*

1854. Gn., Spec. Gen., Delt., 96, *Clanyma.*
1859. Wlk., C. B. Mus., Het., xvi, 152, *Palthis.*
1872. Grt., Trans. Am. Ent. Soc., iv, 108, *Clanyma.*
1873. Grt., Trans. Am. Ent. Soc., iv, 309, *Palthis.*

Habitat.—With the preceding.

The type is probably with M. Oberthür.

Genus **HETEROGRAMMA** Gn.

1854. Gn., Spec. Gen., Delt., 91.

H. pyramusalis Wlk.*

1859. Wlk., C. B. Mus., Het., xvi, 106, *Herminia.*
gyasalis Wlk.
1859. Wlk., C. B. Mus., Het., xix, 856, *Herminia.*
rurigena Grt.
1873. Grt., Trans. Am. Ent. Soc., iv, 305, *Phalænophana.*
1881. Smith, Bull. Bkln. Ent. Soc., vii, 6, *Heterogramma.*

Habitat.—Canada, in June; New York, in May; Middle, Central and Southern States; Missouri and District of Columbia, in August.

All the types are in the British Museum and were directly compared.

H. palligera Smith.*

1884. Smith, Bull. Bkln. Ent. Soc., vii, 6, *Heterogramma.*

Habitat.—California; Florida.

The types are in the National Museum and Edwards collection. It is perhaps possible that the Floridian form is not the same as that from California; but the differences have seemed unimportant from the material at command.

Genus **PSEUDORGYIA** Harv.

1875. Harv., Bull. Buff. Soc. Nat. Sci., II, 283.

P. versuta Harv.*

1875. Harv., Bull. Buff. Soc. Nat. Sci., II, 284, *Pseudorgyia.*

HABITAT.—Texas, in May.

The type is in the British Museum. A series of specimens in the National Museum from the Belfrage collection, evidently form part of the lot from which Dr. Harvey's type was received.

P. russula Grt.

1883. Grt., Papilio, III, 75, *Pseudorgyia.*

HABITAT.—Arizona.

The type is in the Neumœgen collection.

Genus **SISYRHYPENA** Grt.

1873. Grt., Can. Ent., V, 227.

S. orciferalis Wlk.*

1859. Wlk., C. B. Mus., Het., XVI, 235, *? Hormisa.*
1859. Wlk., C. B. Mus., Het., XIX, 876, *? Epizeuxis.*
pupillaris Grt.
1873. Grt., Can. Ent., V, 227, *Sisyrhypena.*

HABITAT.—Texas; Southern States.

Both the types are in the British Museum and have been directly compared.

Genus **CAPIS** Grt.

1882. Grt., Can. Ent., XIV, 20, 119.

C. curvata Grt.*

1882. Grt., Can. Ent., XIV, 20 et 119, *Capis.*
1882. Smith, Can. Ent., XIV, 100, *Capis.*
1882. Grt., Papilio, II, 185, *Capis.*
1883. Grt., Can. Ent., XV, 6, *Capis.*

HABITAT.—Canada, in July; Maine to New York; Northern and Middle States.

Types are in the British Museum and in the U. S. National Museum.

Genus **RENIA** Gn.

1854. Gn., Spec. Gen., Delt., 91.

R. discoloralis Gn.*

1854. Gn., Spec. Gen., Delt., 82, *Renia.*
fallacialis Wlk.
1859. Wlk., C. B. Mus., Het., XVI, 38, *Hypena.*
1872. Grt., Trans. Am. Ent. Soc., IV, 25, 100, pr. syn
generalis Wlk.
1859. Wlk., C. B. Mus., Het., XVI, 29, *Hypena.*
thraxalis Wlk.
1859. Wlk., C. B. Mus., Het., XVI, 109, *Herminia.*
1891. Smith, List Lepidopt., 63, pr. syn.

HABITAT.—Canada to Virginia; Central States; New York and Delaware, in July; District of Columbia, in August.

Guenée's types are probably with M. Oberthür. The Walker types are in the British Museum. They agree with each other and with the specimens identified by Mr. Grote as *discoloralis*. Walker did not really recognize Guenée's genus and described a number of species belonging to it under *Herminia* and *Hypena*. Curiously enough, nearly all of Walker's Deltoids can be recognized from the description. I tried to recognize the species before I expected to have the chance to study them autoptically, and in every case my identification proved correct. Under *fallacialis*, Walker's first specimen from which the description was drawn is *discoloralis*, while the others are *brevirostralis*.

R. salusalis Wlk.*

1859. Wlk., C. B. Mus., Het., XVI, 107, *Herminia*.
brevirostralis Grt.
1872. Grt., Trans. Am. Ent. Soc., IV, 25, *Renia*.
1873. Grt., Trans. Am. Ent. Soc., IV, 309, pl. I, ff.; 91, 92, *Renia*.

HABITAT.—Eastern, Middle, and Central States; Alabama; Colorado.

Walker's type is in the British Museum.

Types of the Grote species are in the collection of the American Entomological Society and also in the British Museum. I could thus compare the types of both species.

R. alutalis Grt.

1872. Grt., Trans. Am. Ent. Soc., IV, 99, *Renia*.
1873. Grt., Trans. Am. Ent. Soc., IV, 309, *Renia*.

HABITAT.—Middle States.

I have not seen the type. It was probably in the collection at Philadelphia, and has been destroyed. The specimens in the British Museum from the Grote collection agree with my identification of the species.

R. sobrialis Wlk.

1859. Wlk., C. B. Mus., Het., XVI, 228, *Hypena*.
restrictalis Grt.
1872. Grt., Trans. Am. Ent. Soc., IV, 26, pl. I, f. 94, *Renia*.

HABITAT.—Nova Scotia to Virginia; Central States.

Walker's type is in the British Museum. Types of Grote's species are in the collection of the American Entomological Society and in the British Museum.

R. larvalis Grt.*

1872. Grt., Trans. Am. Ent. Soc., IV, 20, *Renia*.
1873. Grt., Trans. Am. Ent. Soc., IV, 303, *Renia*.

HABITAT.—New York in August, to Texas; Delaware in May; Central States; Florida in March.

Types are in the collection American Entomological Society and in the British Museum. This seems to me only a larger and paler form of *restrictalis*. The palpal characters pointed out by Mr. Grote are evanescent, I believe; but it will require further study to state this positively.

R. clitosalis Wlk.*

1859. Wlk., C. B. Mus., Het., XVI, 108, *Herminia*.
centralis Grt.
1872. Grt., Trans. Am. Ent. Soc., IV, 27, *Renia*.

HABITAT.—Nova Scotia to West Virginia; Central States; New York in August; District of Columbia in August.

Walker's type is in the British Museum. Types of the Grote species are in the collection of the American Entomological Society and in the British Museum. From a specimen named by Walker in the D'Urban collection, Mr. Grote referred this name to *Bleptina caradrinalis* (Can. Ent., IX, 29). It is probable that this is only a small, dark form of *sobrialis* (*restrictalis*).

R. flavipunctalis Geyer.*

1832. Geyer, Zutræge, IV, 25, f. 701, 702, *Antiblemma*.
1859. Wlk., C. B. Mus., Het., XIX, 859, ? *Herminia*.
1881. Grt., Can. Ent., XIII, 91, *Renia*.
phalerosalis Wlk.
1859. Wlk., C. B. Mus., Het., XVI, 107, *Herminia*.
heliusalis Wlk.
1859. Wlk., C. B. Mus., Het., XVI, 108, *Herminia*.
pastoralis Grt.
1872. Grt., Trans. Am. Ent. Soc., IV, 27, *Renia*.
1873. Grt., Trans. Am. Ent. Soc., IV, 304, = *belfragei*.
belfragei Grt.
1872. Grt., Trans. Am. Ent. Soc., IV, 27, *Renia*.
1873. Grt., Trans. Am. Ent. Soc., IV, 304, pl. I, f. 95, *Renia*.
1883. Grt., Can. Ent., XIII, 91, pr. syn.

HABITAT.—Canada to Texas; Alabama; New Mexico; New York in July and August; Texas, May and June; Colorado in August and September.

Geyer's species was described from Java; but represents our common form. Types of the Grote and Walker species are in the British Museum, and a type of *belfragei* is also in the collection of the American Entomological Society.

R. factiosalis Wlk.*

1859. Wlk., C. B. Mus., Het., XVI, 37, *Hypena*.
plenilinealis Grt.
1872. Grt., Trans. Am. Ent. Soc., IV, 99, *Renia*.

HABITAT.—Canada in August; Middle States; Colorado in August and September.

Walker's type is in the British Museum, while Mr. Grote's is in the collection of the American Entomological Society. It is likely that *alutalis* will come to this species as a variety.

Genus **TETANOLITA** Grt.

1873. Grt., Trans. Am. Ent. Soc., IV, 305.

T. mynesalis Wlk.*

1859. Wlk., C. B. Mus., Het., XIX, 860, *Bleptina.*
lixalis Grt.
1873. Grt., Trans. Am. Ent. Soc., IV, 306, *Tetanolita.*

HABITAT.—Middle, Central and Southern States; Illinois in July; Texas in March, May, and October.

Walker's type is in the British Museum and is like the *lixalis* of the Grote collection. The type of the latter I have not seen. It was probably at Philadelphia, as were most of the species described by Mr. Grote in the two papers in the fourth volume of the "Transactions."

Genus **BLEPTINA** Gn.

1854. Gn., Spec. Gen., Delt., 66.

B. caradrinalis Gn.*

1854. Gn., Spec. Gen., Delt., 67, *Bleptina.*
1859. Wlk., C. B. Mus., Het., XVI, 120, *Bleptina.*
1872. Grt., Trans. Am. Ent. Soc., IV, 93, *Bleptina.*
1878. Grt., Bull. Geol. Surv., III, 799, *Bleptina.*
cloniasalis Wlk.
1859. Wlk., C. B. Mus., Het., XVI, 105, *Herminia,*
1877. Grt., Can. Ent., IX, 29, pr. syn.

HABITAT.—Canada to Texas to Colorado; New Mexico; northern range in July; Texas in April, May, and June; Kansas in June; Delaware in June; Colorado in June.

Guenée's type is probably with M. Oberthür. Walker's type is in the British Museum.

B. inferior Grt.*

1872. Grt., Trans. Am. Ent. Soc., IV, 94, *Bleptina.*

HABITAT.—New York to Alabama; Central States; Texas in May, August, and October.

The type is in the collection of the American Entomological Society.

Genus **HYPENULA** Grt.

1876. Grt., Can. Ent., VIII, 27.

H. cacuminalis Wlk.*

1859. Wlk., C. B. Mus., Het., XVI, 37, *Hypena.*
1891. Smith, List Lepid., 63, *Hypenula.*
biferalis Wlk.
1859. Wlk., C. B. Mus., Het., XVI, 237, *Herminia.*
opacalis Grt.
1876. Grt., Can. Ent., VIII, 27, *Hypenula.*

HABITAT.—Southern States; Texas, May and August.

All the types are in the British Museum, and refer to one species only.

Genus **LOMANALTES** Grt.

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 13.

L. eductalis Wlk.*

1859. Wlk., C. B. Mus., Het., XVI. 36, *Hypena.*
lætulus Grt.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 14, pl. 1, ff. 12, 13, *Lomanaltes.*

HABITAT.—Nova Scotia to Pennsylvania; Minnesota; New York in May.

Both the types are in the British Museum, and refer to one species only.

Genus **BOMOLOCHA** Hbn.

1816. Hbn., Verzeichniss, 343.

B. baltimoralis Gn.*

1854. Gn., Spec. Gen., Delt., 34, *Hypena.*
1859. Wlk., C. B. Mus., Het., XVI, 31, *Hypena.*
1870. Rob., Ann. Lyc. Nat. Hist., N. Y., IX, 310, *Hypena.*
1872. Grt., Trans. Am. Ent. Soc., IV, 102, *Hypena.*
1873. Grt., Trans. Am. Ent. Soc., IV, 309, *Bomolocha.*
1873. Grt., Can. Ent., V, 226, *Bomolocha.*
1882. Pack., Papilio, II, 181, larva.
benignalis Wlk.
1859. Wlk., C. B. Mus., Het., XVI, 32, *Hypena.*
1870. Rob., Ann. Lyc. Nat. Hist., N. Y., IX, 310, pr. syn.
1873. Grt., Can. Ent., V, 220, pr. syn.
laciniosa Zell.
1872. Zell., Verh. k. k. zoöl.-bot. Ges., XXII, 464, pl. II, f. 8, *Hypena.*
1873. Grt., Can. Ent., V, 226, pr. syn.

HABITAT.—Nova Scotia to Middle and Central States; Canada and New York in June; District of Columbia in August.

Guenée's type is probably with M. Oberthür. The Walker and Zeller types are in the British Museum. *Benignalis* is the paler form of the species; *laciniosa* is the darker, more typical form.

B. scutellaris Grt.*

1873. Grt., Can. Ent., V, 225, *Bomolocha.*

HABITAT.—British Columbia; Middle and Northern States; New York in August.

The type is in the British Museum. I have a carefully compared figure of the specimen.

H. manalis Wlk.*

1859. Wlk., C. B. Mus., Het., XVI, 33, *Hypena.*
1870. Rob., Ann. Lyc. Nat. Hist., N. Y., IX, 311, *Hypena.*
1872. Grt., Trans. Am. Ent. Soc., IV, 103, *Hypena.*
1873. Grt., Trans. Am. Ent. Soc., IV, 309, *Bomolocha.*

HABITAT.—Canada; Northern and Middle States; Minnesota; District of Columbia in June.

The type is in the British Museum.

B. bijugalis Wlk.*

1859. Wlk., C. B. Mus., Het., XVI, 32, *Hypena.*
1870. Rob., Ann. Lyc. Nat. Hist., N. Y., IX, 311, *Hypena.*
1872. Grt., Trans. Am. Ent. Soc., IV, 103, *Hypena.*
1873. Grt., Trans. Am. Ent. Soc., IV, 309, pl. I, f. 93, *Bomolocha.*
1873. Grt., Can. Ent., V, 226, *Bomolocha.*
pallialis Zell.
1872. Zell., Verh. k. k. zoöl. bot. Ges., XXII, 466, pl. II, f. 9, *Hypena.*
1873. Grt., Can. Ent., V, 226, pr. syn.
fecialis Grt.
1881. Grt., Can. Ent., XIII, 133, *Bomolocha.*

HABITAT.—Canada to Florida, west to the Rocky Mountains; Canada and New York in June; Texas in July.

The Walker and Grote types are in the British Museum. *Fecialis* is based on a washed out, faded specimen, which thus looks different.

B. abalinealis Wlk.*

1859. Wlk., C. B. Mus., Het., XVI, 31, *Hypena.*
1872. Grt., Trans. Am. Ent. Soc., IV, 102, *Hypena.*
1873. Grt., Can. Ent., V, 226, *Bomolocha.*
1891. Dyar, Can. Ent., XXIII, 157, larva.

HABITAT.—Canada; Eastern, Middle, and Central States; June, July, and August.

The type is in the British Museum.

B. annulalis Grt.

1876. Grt., Check List Noct., 45, *Bomolocha.*

HABITAT.—Texas.

The type in the British Museum represents a species I had not before seen.

B. achatinalis Zell.*

1872. Zell., Verh. k. k. zoöl. bot. Ges., XXII, 468, pl. II, f. 7, *Hypena.*
1873. Grt., Can. Ent., V, 226, =*madefactalis.*

HABITAT.—Middle States to Texas; Delaware in June.

The type is in the Museum of Comparative Zoölogy at Cambridge. Zeller suspected that he might be redescribing Guenée's species, and Mr. Grote at once discovered that it was what he had identified as such, and referred Zeller's name to the synonymy. Later he restored the name. and has continued to use it as well as *madefactalis* without further explanation. There seems to be some confusion of labels in the Grote collection, for the same species is named both *toreuta* and *achatinalis.*

B. madefactalis Gn.

1854. Gn., Spec. Gen., Delt., 35, *Hypena.*
1859. Wlk., C. B. Mus., Het., XV, 33, *Hypena.*
1872. Grt., Trans Am. Ent. Soc., IV, 103, *Hypena.*
1873. Grt., Can. Ent., V, 226, *Bomolocha.*

HABITAT.—Middle and Southern States.

Described from a figure by Abbot. I am not certain that this species, as distinct from the forms of *achatinalis*, has been identified in our collections.

B. idæusalis Wlk. *

1859. Wlk., C. B. Mus., Het., XIX, 839, ? *Hypena.*
citata Grt.
1872. Grt., Trans Am. Ent. Soc., IV, 101, *Hypena.*
1876. Grt., Check List Noct., 45, *Bomolocha.*
trituberalis Zell.
1872. Zell., Verh. k. k. zoöl. bot. Ges., XXII, 469, pl. II, f. 6, *Hypena.*
1882. Grt., New List, 44, pr. syn.

HABITAT.—Southern States; Texas; Illinois in August.

The Grote and Walker types are in the British Museum. The Zeller type is at Cambridge, and all refer to one species.

B. mitographa Grt.

1873. Grt., Trans. Am. Ent. Soc., IV, 296, *Erastria.*
1881. Grt., Papilio, I, 11, *Eustrotia.*

HABITAT.—Alabama.

The type is in the British Museum. It is only half a specimen, both wings of one side missing; but it shows plainly a *Hypena* near *citata*, unlike anything I had before seen.

B. toreuta Grt.*

1872. Grt., Trans. Am. Ent. Soc., IV, 24, *Hypena.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 38, *Euhypena.*
internalis || Rob.
1870. Rob., Ann. Lyc. Nat. Hist. N. Y., IX, 311, *Hypena.*
1892. Grt., Trans. Am. Ent. Soc., IV, 24, pr. syn.
albisignalis Zell.
1872. Zell., Verh. k. k. zoöl. bot. Ges., XXII, 463, *Hypena.*
1876. Grt., Check List Noct., 45, pr. syn.

HABITAT.—Middle States to Texas, July.

Mr. Grote's type is in the collection of the American Entomological Society. The Zeller type is at Cambridge.

B. sordidula Grt.*

1872. Grt., Trans. Am. Ent. Soc., IV, 103, *Hypena.*

HABITAT.—Pennsylvania; Texas.

I have not seen the type. The specimens in the Grote collection in the British Museum are from Belfrage, Texas. It is likely that the typical example was in the collection of the American Entomological Society.

B. umbralis Smith.*

1884. Smith, Bull. Bkln. Ent. Soc., VII, 4, *Bomolocha.*

HABITAT.—Florida.

The type is in the National Museum.

B. caducalis Wlk.*

1859. Wlk., C. B. Mus., Het., XVI, 35, *Hypena.*
profecta Grt.
1872. Grt., Trans. Am. Ent. Soc., IV, 104, *Hypena.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 30, *Macrhypena.*

HABITAT.—Canada, Northern, Eastern, and Middle States.

Mr. Walker's type is in the British Museum. Where the Grote type is at present, I do not know. The specimens of *profecta* from the Grote collection are like the Walker species.

B. deceptalis Wlk.*

1859. Wlk., C. B. Mus., Het., XVI, 30, *Hypena.*
1872. Grt., Trans. Am. Ent. Soc., IV, 104, *Hypena.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 51, *Macrhypena.*

HABITAT.—Canada to Virginia; Central States; New York in July.

The type is in the British Museum. The specimens so named in the Grote collection are like the type.

B. damnosalis Wlk.*

1859. Wlk., C. B. Mus., Het., XVI, 28, *Hypena.*
perangulalis Harv.
1875. Harv., Bull. Buff. Soc. Nat. Sci., II, 283, *Bomolocha.*

HABITAT.—Canada to Middle and Central States; New York in July.

Walker's type is in the British Museum and is like the *perangulalis* of the Grote collection and of American collections generally. Other specimens associated with the type by Walker are *deceptalis.* As a matter of fact, I believe that the two names refer to forms of one species only.

B. edictalis Wlk.*

1859. Wlk., C. B. Mus., Het., XVI, 28, *Hypena.*
rellifera Grt.
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 87, pl. II, f. 7, *Meghypena.*

HABITAT.—Canada; New York in July; Northern and Eastern States.

Walker's type is in the British Museum; the Grote type is in the National Museum from the Meske collection. Specimens of *vellifera* from the Grote collection made actual comparison possible.

B. lentiginosa Grt. *

1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 87, *Meghypena.*

HABITAT.—New York; Northern States.

The type is with Dr. Lintner. I believe that this is merely a form of the preceding.

Genus **HYPENA** Schrank.

1802. Schrank, Fauna Boica, ii, 2, 163.

H. humuli Harr.*

1835. Harris, Cat. Ins. Mass., 71, *Crambus.*
1841. Harris, Rept. Ins. Mass., 315, *Hypena.*
1855. Fitch, Trans. N. Y. State Agl. Soc., xv, 555, pl. i, f. 1, *Hypena.*
1856. Fitch, 1st and 2d Rept. Ins. N. Y., 323, pl. i, f. 1. *Hypena.*
1862. Harris, Injurious Insects, Flint ed,, 477, f. 237, *Hypena.*
1872. Grt., Trans. Am. Ent. Soc., iv, 101, *Hypena.*
1878. Lint., Ent. Cont., iv, 128, *Hypena.*
evanidalis Rob.
1870. Rob., Ann. Lyc. Nat. Hist., N. Y., ix, 311, *Hypena.*
1872. Grt., Trans. Am. Ent. Soc., iv, 101, *Hypena.*
1872. Grt., Can. Ent., iv, 111, *Hypena.*
1873. Grt., Trans. Am. Ent. Soc., iv, 309, pl. i, f. 87, *Hypena.*
1878. Lint., Ent. Cont., iv, 128, pr. syn.
germanalis Wlk.
1859. Wlk., C. B. Mus., Het., xvi, 35, *Hypena.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., ii, 52, pr. syn.
var. **olivacea** Grt. *
1873. Grt., Can. Ent., v, 226, *Hypena.*
1882. Grt., New List, 44, pr. var.
var. **albopunctata** Tepper.
1881. Tepper, Bull. Bkln. Ent. Soc., iv, 2, pl. i, f. 5, *Hypena.*
1891. Smith, List Lepid., 64, pr. var.

Habitat.—Canada; Northern and central United States, south to Alabama, west to Washington; Colorado in September, October; British Columbia, May to July, September, October; Delaware in August; Kansas in April.

A specimen labeled *humuli* is in the Harris collection at the Boston Society of Natural History, and is presumably a type. The type of *evanidalis* I have not seen. That of *germanalis* is in the British Museum and is normal *humuli.* In the same collection is the type of *olivacea*, which scarcely deserves a varietal name. The type of *albopunctata* is in the Tepper collection, and is a very dark, almost black, form from Washington. But for a very large series from widely divergent localities I would have considered this Pacific coast form specifically distinct. A series from British Columbia recently received places the relationship beyond reasonable doubt.

H. californica Behr.*

1870. Behr, Trans. Am. Ent. Soc., iii, 23, *Hypena.*

Habitat.—California; British Columbia.

Typical specimens are in the Edwards collection.

H. decorata Smith.*

1884. Smith, Bull. Bkln. Ent. Soc., vii, 4, *Hypena.*

Habitat.—California; Vancouver.

Types are in the National Museum and in the Edwards collection.

H. scabra Fabr.*

1794. Fabr., Ent. Syst., Suppl., IV, 418, *Hyblaea.*
1854. Gn., Spec. Gen., Delt., 40, *Hypena.*
1859. Wlk., C. B. Mus., Het., XVI, 34, *Hypena.*
1872. Grt., Trans. Am. Ent. Soc., IV, 102, *Hypena.*
1873. Lint., Can. Ent., V, 81, *Hypena.*
1873. Grt., Bull. Buff. Soc. Nat. Sci., I, 38, *Plathypena.*
1880. Riley, Amer. Ent., III, 8, *Hypena.*
1880. Coquillett, Can. Ent., XII, 43, larva.
1881. Coquillett, Can. Ent., XIII, 137, larva.
erectalis Gn.
1854. Gn., Spec. Gen., Delt., 40, *Hypena.*
1859. Wlk., C. B. Mus., Het., 35, ? an var. pr.
1872. Grt., Trans. Am. Ent. Soc., IV, 102, *Hypena.*
1873. Lint., Can. Ent., V, 81, = ♀ prec.
palpalis Haw.
1812. Haw., Lep. Britt., 361, *Crambus.*
1829. Steph., Ill. Brit. Ent., Haust., IV, 12, *Hypena.*
1854. Gn., Spec. Gen., Delt., 40, pr. syn.
1859. Wlk., C. B. Mus., Het., XVI, 34, pr. syn.
crassatus Haw.
1812. Haw., Lep. Britt., 336, *Crambus.*
1854. Gn., Spec. Gen., Delt., 40, ? = *erectalis.*
1859. Wlk., C. B. Mus., Het., XVI, 35, = *erectalis.*
obesalis Steph.
1829. Steph., Ill. Brit. Ent., Haust., IV, 11, *Hypena.*
1859. Wlk., C. B. Mus., Het., XVI, 35, = *erectalis.*
subrufalis Grt.
1872. Grt., Trans. Am. Ent. Soc., IV, 102, var. *erectalis.*

Habitat.—Nova Scotia to Texas; east of the Rocky Mountains, June to October.

I have seen none of the types. The references to Haworth and Stephens are from Walker and have not been verified by me.

Of the other American species referred to *Hypena* by Walker, *H. rufinalis* is *Crambus abtrusellus* Wlk., and *H. cæcalis* is *Scoparia centuriella.* The comparisons for the specific determination of these insects were kindly made for me by Mr. Warren, after I had pointed out the specimens to him.

Genus **GABERASA** Wlk.

1865. Wlk., C. B. Mus., Het., XXXIV, 1197.

G. ambigualis Wlk.*

1865. Wlk., C. B. Mus., Het., XXXIV, 1198,, *Gaberasa.*
bifidalis Grt.
1872. Grt., Trans. Am. Ent. Soc., IV, 105, *Tortricodes.*
1878. Grt., Bull. Geol. Surv., VI, 564, *Eulintneria.*
♀ *indirisalis* Grt.
1872. Grt., Trans. Am. Ent. Soc., IV, 106, *Tortricodes.*
1873. Grt., Trans. Am. Ent. Soc., IV, 308, *Heterogramma.*
1878. Lintner, Ent. Contrib., IV, 110, pr. syn.

Habitat.—Canada to Texas; New York May to August.

The type of the Walker species is in the British Museum. Both the Grote types are in the collection of the American Entomological Society. I use Walker's generic term in preference to *Tortricodes*, used in my list of Lepidoptera, because the South American species seen by me resemble our species less than the generic description would indicate.

Genus **DERCETIS** Grt.

1878. Grt., Bull. Geol. Surv., IV, 186.

D. vitrea Grt. *

1878. Grt., Bull. Geol. Surv., IV, 187, *Dercetis*.

HABITAT.—New York in July; Middle States.

D. pygmæa Grt. *

1878. Grt., Bull. Geol. Surv., IV, 187, *Dercetis*.

HABITAT.—Texas, July; Florida.

Types of both of the species are in the British Museum.

Family BREPHIDÆ.

Genus **BREPHOS** Ochs.

1816. Ochs., Schmett. Eur., IV, 96.

B. infans Mœschl.*

1862. Mœschl., Wien. Ent. Monatschr., VI, 134, pl. 1, f. 4, *Brephos*.
1865. Wlk., C. B. Mus., Het., XXXIII, 806, *Brephos*.
1867. G. & R., Trans. Am. Ent. Soc., I, 189, *Archiearis*.
1875. Speyer, Stett. Ent. Zeit., XXXVI, 171, *Brephos*.
1878. Lint., Ent. Cont., IV, 227, 229, *Brephos*.
1885. Dimmock, A. K., Psyche, IV, 273, *Brephos*.
1886. Snellen, Tijdschr. voor Entom., XXIX, 137, *Brephos*.
parthenias‡ Wlk.
1857. Wlk., C. B. Mus., Het., XVII, 841, *Archiearis*.
1860. Mœschl., Wien. Ent. Monatschr., IV, 371, *Brephos*.
1862. Mœschl., Wien. Ent. Monatschr., VI, 134, pr. syn.
hamadryas Harr.
1869. Harr., Ent. Corr., by Scudder, 174, pl. 1, f. 4, *Brephos*.
1867. Grt. & Rob., Trans. Am. Ent. Soc., I, 189, pr. syn.

HABITAT.—Labrador to New York in April; Canada in May.

Grote & Robinson's synonymic reference of Harris's species was made before the name was actually published.

B. melanis Bdv.

1868. Bdv., Lep. Cal., Ann. Soc. Ent. Belg., XII, 88, *Brephos*.

HABITAT.—California.

B. californicus Bdv.

1868. Bdv., Lep. Cal., Ann. Soc. Ent. Belg., XII, 88, *Brephos*.

HABITAT.—California.

I am not aware that the above species described by Boisduval have ever been definitely recognized or referred. It ought not to be difficult to ascertain what was intended when the material is at hand.

Genus **LEUCOBREPHOS** Grt.

1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 53.

L. brephoides Wlk.

1857. Wlk., C. B. Mus., Het., XI, 702, *Anarta.*
1864. Grt., Proc. Ent. Soc. Phil., III, 74, *Anarta.*
1867. G. & R., Trans. Am. Ent. Soc., I, 188, *Archiearis.*
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 53, *Leucobrephos.*
1883. Grt., Can. Ent., XV, 55, *Leucobrephos.*
resoluta Zell.
1863. Zell., Stett. Ent. Zeit., XXIV, 136, pl. II, f. 1, *Archiearis.*
1867. G. & R., Trans. Am. Ent. Soc., I, 188, pr. syn.
1874. Grt., Bull. Buff. Soc. Nat. Sci., II, 63, pr. syn.
hoyi Grt.
1880. Grt., Bull. Bkln. Ent. Soc., III, 30, *Melicleptria.*
1883. Smith, Trans. Am. Ent. Soc., X, 251, *Melicleptria.*
1883. Grt., Can. Ent., XV, 55, pr. syn.

HABITAT.—Alaska; Hudson's Bay Territory; Wisconsin.

I have seen none of the types, and give the synonymy as I find it.

L. middendorfi Mén.

1859. Mén., in Schrenk's Reise, 66, pl. 5, f. 9, *Amphidasis.*
1883. Moeschl., Stett. Ent. Zeit., XLIV, 117, *Brephos.*

HABITAT.—Labrador.

I have seen specimens called *middendorfi* by Mœschler, but have not seen Siberian specimens to compare with them.

GENERAL INDEX.

[The object has been to refer to every name used in the body of the work. Family terms are in CAPITALS; generic names begin with a Capital in all cases, while species, varieties, and aberrations are always in lower-case type. Synonyms are in *italics*, and those of genera begin with a Capital. Specific and varietal names are indexed as often as they occur. Generic terms are referred to the page where the list of species begins, or, if a synonym, to the page containing the leading species.]

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